

CHICAGO MEDICAL JOURNAL.

VOL. V.]

MARCH, 1862.

[No. 3.]

ORIGINAL COMMUNICATIONS.

A CASE OF AMPUTATION OF THE LEG SUCCESSFULLY TREATED WITHOUT LIGATING THE ARTERIES.

By H. RISTINE, M. D.,
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During the month of September last, a case of surgery came under my care, somewhat of an anomalous character—to myself, at least; a case of much interest, as well as perplexing, besides procuring no small amount of anxiety for several days regarding its result.

Similar cases may have occurred heretofore, but I have yet to see one of like character, reported through the medium of medical journals, or otherwise.

I have, since the accident, conversed with a number of physicians, regarding its peculiarity, and have met with no one who has ever seen, or had any knowledge of a case of similar character.

The case alluded to was a little girl, daughter of Mr. H. P. Smith, residing about eight miles from this place, who, while playing in the meadow of her father, was accidentally run over by a mowing machine, the scythe of which entirely severed her leg, about an inch above the ankle-joint, without causing any other injury.

I was immediately sent for, and on arriving, which was about three or four hours after the accident occurred, I found her quietly sleeping, without a particle of hæmorrhage, with a good strong circulation; the countenance exhibiting no appearance indicating the loss of much blood. I enquired if she bled much at the time of the accident. The man being present, who carried her to the house, remarked that she bled quite freely immediately following the injury, but it ceased by the time he arrived at the house, which was some two or three hundred yards distant from the meadow. My first impression regarding the arrest of hæmorrhage, was, that syncope from the sudden loss of blood, had temporarily suspended the action of the heart.

Her father, who possessed some knowledge of the circulation, immediately on her arrival at the house, applied a bandage around the injured limb above the knee joint, which I supposed was controlling the hemorrhage at the time of my arrival, as reaction, as before remarked, was well established, and the circulation quite as good as in health.

Amputation being necessary, I immediately sent for Dr. Lyons of Cedar Rapids, to assist me in the operation. As soon as he arrived, which was then some seven or eight hours after the accident, I proceeded after placing her under the influence of chloroform, to amputate, performing the circular operation, about three and a half inches above the point where the limb was severed by the machine. I requested Dr. L. to take up the arteries while I would place a ligature on them. There not being a sufficient amount of hemorrhage to enable him to find the vessels, pressure was removed from the femoral arteries which had been compressed by an assistant during the operation by means of his thumb; after which the arteries still refused to bleed a single drop. I then turned my attention to the bandage applied by the father soon after the injury, which I never doubted had controlled the hemorrhage up to the time of the operation, but on examination however, I found it sufficiently loose to admit of the introduction of

two or three fingers between it and the limb, which could *not* have had any agency whatever in controlling the bleeding. During all this time the little patient had *not lost one teaspoonful of blood*. After removing every thing that could possibly interfere with the circulation in the limb, it became a mystery beyond our comprehension, why there was no hemorrhage. The temperature of the limb as well as the stump, from the time I arrived, up to the time of the operation was in a natural condition.

We allowed her to recover from the influence of the chloroform, and let the stump remain exposed to the influence of the air, for an hour; there being no bleeding, we resorted to warm applications, which we continued perseveringly for at least four hours, during which time *not five drops of blood* oozed from the stump. After having exhausted all the remedies in our possession to bring about a flood of blood, at least sufficient to enable us to find the arteries, without success, we again put her under the influence of chloroform, dressed the stump in the usual manner, leaving the arteries to care for themselves—taking the risk on their bleeding.

We ordered cold applications to the stump, and left particular instruction with the parents how to arrest the hæmorrhage should it occur during our absence, expecting, in the course of a few hours, to hear our patient was bleeding.

On the fourth day after the operation, I dressed the stump, up to which time there had been no discharge whatever of any kind sufficient to discolor the dressing in the least. The stump healed kindly with very little constitutional disturbance, discharging about the usual amount of pus during the healing process.

There was nothing out of the ordinary course of like operations, save there being no arterial hæmorrhage present, no useless ligature, at the same time reaction freely established.

The hæmorrhage must have been arrested at the time of the child's arrival at the house, without the aid of artificial means, as the bandage, when examined, was not drawn suffi-

ciently tight to control the hæmorrhage in the least, and no other means made use of to guard against bleeding, until at the time of the operation.

I am of the opinion the absence of hæmorrhage was entirely due to the retraction of the vessels, and not as some have suggested, to the formation of coagula, which must have been to the extent of nearly four inches, to have prevented a renewal of bleeding after the operation.

If you can account for the departure from the ordinary course of like cases, on any well established physiological principles, I would much like to hear the argument.

MANAGEMENT OF THE INSANE.

By GEORGE C. McFARLAND,

A Student of Rush Medical College.

The treatment of insanity of late years has become more of a speciality. Thus the student of Medicine when he reads his works on practice merely glances at the subject, and the practitioner himself recommends his patients to the various asylums constructed for their benefit, and little is known in regard to their treatment and management by the profession. Now we would throw overboard a large list of drugs contained in the *materia medica*. Medicines are of no use whatever. To successfully treat the insane, the asylums are of course the proper place. The patient should not have the idea that he is going to a prison, and be treated as a felon, but let him know the facts; treat him in person, as if he were sane; let the physician in attendance not assume a manner foreign to his disposition; let him approach his patient in a quiet, self-possessed manner. Bring the patient in contact with sane men; let books and periodicals be thrown in his way, and soon he will rouse and the case seem hopeful. We would cite a case that came under our observation.

T. K., brought to the asylum some years ago, having committed a homicide. At the time of his admittance he was very morose and sought to kill all his fellow men; seldom spoke, and when he did would call for a butcher knife to cut his way out. Books were handed him, and in his solitude he acquired a taste for reading; soon after he was taken out to do light work; soon a change was manifest, and at the present time he fills his accustomed seat at the divine service and takes much interest in the proceedings. So much improvement is seen we consider him in a fair way of recovery.

Now we think this treatment could be well introduced in poor houses, for it is well known that, for want of room, our State institution does not come up to the requirements of the State, and poor houses of the various counties become their retreat, and the arrangements they have for the care of the insane is wholly inefficient. Thus we have seen men chained to the floor, a total want of food and clothing, rendering them objects of commiseration.

A man was admitted to the hospital, having had previously for his habitation a hole in the ground, roofed over, with an opening simply large enough for food to be passed down. For years he remained in this condition, and became an object of dread to the people. At last the real estate owners thought this man injured the sale of their lands by his hideous cries, and pronounced him a nuisance. A public meeting was called. Some were for killing him; others again were for constructing a similar den in the woods. The Legislature, however, being in session, some good man caused to be appropriated a sum of money, and he was placed in an Insane Hospital. Coming in contact with men, he gradually began to improve, and at the present time, he is gaining his livelihood in the town as a laborer. Finally, we would say in the management of the insane, let all drugs be discarded; let the patient feel that he is a man; wait upon him in words of kindness, not in violence and deceitfulness; rule him by love, not fear, and we think those called to treat the insane will

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meet with success. Occupation which requires thought is far preferable, in a curative point of view, to that which requires none. Thus the artisan employment for men and household employments for women, are much more useful as curative agencies, than the use of the spade and hoe for the former, or the needle for the latter.

Mechanical restraint in the management of the insane is fast going out of date. It was not long since that shower baths filled every ward and the chief employment of the more convalescent patients was in constructing the straight-jacket for controlling the more violent. Now we would discard these wholly. However, where the patient is suicidal, and seeks to injure himself and others, then perhaps a comfortable straight-jacket may be admissable. In conclusion, we would say, this subject of moral treatment that we have suggested may be worthy of larger consideration in the management of the insane.

[*Remarks.*—The writer of the foregoing will be recognized by many of our readers as a son of the sagacious and popular Superintendent of the Illinois State Insane Asylum. While there is no especial novelty in the views advanced, the extreme cases briefly narrated will serve well to illustrate the benign influences of the modern treatment of insanity, in strong contrast with that in olden time. There is an amount of suffering and horror among the pauper insane, even of this State, which would startle the most stolid were it fully depicted. One assertion of our correspondent is too sweeping. "Drugs" are not to be entirely discarded in the treatment of the insane. The advances of the present time in physiology, pathology and treatment have shown that the material lesions, centric and ex-centric, which originate or intensify mental disorders, may be reached, to a limited extent, by skilful medication. Insanity is always a result of material lesion. It is not a merely spiritual affair; but, as in other maladies, hygiene and correct regimen are leading methods of cure.—A.]

A CASE OF HYDROCELE CURED BY THE INJECTION OF TINCT. OF IODINE.

By J. N. GREEN, M. D.,

Of Stilesville, Indiana.

A few months since, I was consulted by H., aged about 25, who had suffered for several years previous with an hydrocele. He had, as he informed me, the thing "tapped" repeatedly by Dr. Mathews, with no other result than temporary relief from the swelling, the effusion returning in a short time, and requiring the operation to be repeated again.

Becoming justly tired of this method of treatment, the patient was induced to inquire after a radical cure, if such could be found. I accordingly recommended to him with much confidence the injection of tinct. of Iodine into the sac as practiced by PROF. BRAINARD. He at once consented to the operation; and I introduced a trocar into the sac, drawing off the effused fluid and injected what I supposed to be a sufficient amount of tinct. of Iodine in its stead. This done, I told the patient it might be necessary to repeat the process once or twice, but assured him if persisted in he might expect an entire cure. He expressed his willingness to submit to the requisite number of operations to secure this desirable consummation. But fortunately, a repetition of the operation was unnecessary; the patient was cured by the first injection, thanks to DR. BRAINARD and the tinct. of Iodine.

I do not report this case because there is anything remarkable in it, or skill in the operation; but simply to add the weight of this case to the large and daily increasing amount of evidence before the medical public, of the usefulness of iodine in the cure of this and analogous diseases. If a case of several years standing may be thoroughly cured by a single injection, what a source of relief is held out to the thousands in the country, afflicted with this unpleasant disease. I trust,

furthermore, that the attention of the medical profession may be directed to this matter, and that they will treat their cases of hydrocele as above.

CASE OF POISONING.

By A. K. VAN HORN, M. D., of Baileyville, Ill.

On September 4th, 1861, S. Walters requested me to visit his daughter, a child about four years old, who, he said, "had been taken with fits," a short time previous. I learned on my arrival, that she had commenced to "act strangely" very soon after her return from a grove, where she had spent the morning looking for berries. Her mother, alarmed at the symptoms, had given a large table spoonful of castor oil, which produced no effect, beyond a slight emesis at the moment of administration. She had continued to grow worse for an hour after reaching home, but since then had remained in much the same condition, in which I found her, on my arrival, two and a half hours after the commencement of her attack. Her symptoms were so peculiar and interesting that I venture to describe them at some length.

Her general appearance indicated good health, and to a casual observer would have presented no very unusual feature, except the fixed, expressionless eye. She uttered no complaint, and except the slight nausea, caused by the offensive taste of the oil, appeared to have had no sickness at her stomach. Her hands, feet, and face were considerably swollen, and hot to the touch; her *face, redder* than usual; her body was a little above the natural temperature, dry, and on the more delicate parts a slight scarlet rash was visible; the abdomen was hard, with slight meteorism; the pulse was a little accelerated and feeble; the tongue was not much coated, but

very dry; the mouth and fauces were parched, as if with thirst, and of a dusty, red color. There appeared to be unpleasant sensations in the mouth and larynx, as the patient frequently seemed as if trying to rub her tongue with her fingers, and often clutched at her throat.

But it was on the *nervous system* that the force of the poison mainly spent itself. That part of it, which guides and governs the voluntary motions, producing the harmony of action so necessary to happiness, and even existence, seemed to have resigned its seat to a tricky elf, who revelled in the mad disorder he created among the muscles, and who, touching the wrong keys, like an unskillful player, got not *music*, but *discord*, from the "harp of a thousand strings." Even the external senses, sight, hearing, &c., did not escape the mad spirit's fingers, who filled the "porches of the ears" with strange sound, and led whole troops of phantoms to vex the fixed eye.

She lost the power of locomotion almost entirely, and stood with the air and attitude of one deeply intoxicated. The slightest inclination from the perpendicular resulted in a fall. If assisted to walk, she staggered along, with the body bent forward. Every few minutes she would have an attack of convulsions, affecting principally her legs and arms, and rapid and violent as though caused by an electric shock, but apparently painless. The hearing seemed almost closed to external sounds; but unreal ones were present, as she sometimes inquired, "what made that big noise?" when the room was entirely still. The faculty of speech, though not *lost*, was so changed that much of what she said was unintelligible. Among all the organs, none exhibited so marked peculiarity as her eyes! The pupils were enormously dilated, seeming to cover almost the whole front of the globe, and insensible to light. Unreal objects flitted before them, which she was always endeavoring to catch; but sight was not entirely abolished, as she would grasp at articles presented to her; but she frequently reached too far, or not far enough, as if

unable to appreciate distance correctly. Nor were the emotions unaffected. She talked almost incessantly. After a few moments of silence, she would burst into a violent fit of weeping, which often ended in a paroxysm of boisterous laughter, and thus she swung, "a pendulum betwixt a smile and tear."

In about six hours from the commencement of the attack the symptoms began to decline in violence; her hearing grew more acute, face less flushed, and the convulsions less marked, and recurring at longer intervals. During the night following she slept profoundly, and the next day had no symptoms, save slight vertigo and dilated pupils, which passed off in a short time, leaving to the patient her usual health.

The usual treatment by emetics and cathartics was adopted. There is no known antidote to this class of poisons. Very large doses were required to produce any effect, as the stomach and bowels seemed paralyzed and impassive to the amounts ordinarily administered. No traces of the poison were seen in the evacuations. Large quantities of stramonium were found growing near the house, and in the grove, where she had been wandering, many stalks of a plant answering to the description of belladonna were found, each full of its beautiful, but treacherous red berries.

Both of these poisons belong to the class called by Wood, *Cerebral Stimulants*, and have many symptoms in common; but from a consideration of all the symptoms, I incline to the belief that the child had eaten berries gathered from the Deadly Nightshade.

QUESTIONS, AS TO THE VELOCITY OF THE BLOOD'S MOVEMENTS.

1st—Is the teaching that the heart sends into the aorta 3 oz of blood per second, and that this blood moves 12 inches in the same length of time, consistent with the known size of that vessel?

2nd—Considering the aorta always filled with blood, (*which must be the case*,) can the blood move farther per second than the 3 oz of blood would fill the cavity of the aorta in the quiescent state?

This, if the diameter of the aorta is 1 inch, would be near 7 inches. If 15 inches, would be little more than 3 inches.

3rd—If the 3 oz of blood received each second, fill 6 inches of the cavity of the aorta, and move 12 inches in the same length of time, would it not get 6 inches clear in advance of the following 3 oz of the next second, or leave the artery but partly full?

4th—Are the combined cavities of the capillaries, arising from any given artery, four hundred times as large as the artery, which must be the case, if the (as we are taught) blood moves 12 inches per second in the arteries, and moves 3 inches in the capillaries, in the same length of time?

5th—Make the aorta four hundred times as large as it is, and would a man be "*big enough to hold it?*"

6th—What is the diameter of the ascending aorta?

Will some one please answer?

Respectfully,

R. H. C.

SELECTED.

SEROUS APOPLEXY—CLOSURE OF OS UTERI, &c.

CASES REPORTED TO BUFFALO MEDICAL ASSOCIATION.

Dr. Miner reported the following case which he had recently visited in the country, which exhibited evidences of effusion, complicated and modified by some nervous affection resembling more the convulsion of epilepsy than any other disease.

August 2d, 1861—Visited C. S., aged 35, of healthy, robust constitution, by occupation a farmer, and accustomed to active labor. Ten years since, he was injured by the falling upon his chest of a barrel of salt; since which time, after unusual fatigue or exposure, has had a peculiar spasm, involving the whole system, and appearing in many respects like epilepsy. The day previous to this visit, had suddenly fallen while working in the field, clasped his head firmly, declaring that some one had struck him, and complaining of pain in the head. He lost in a few hours all power of speech, but could write, and in that way made himself understood; pupil was dilated; conjunctiva congested; voluntary motion slow and uncertain; tongue could only be protruded very slowly and considerably to one side; pulse slow and full; respiration labored; at times a remarkable tonic spasm commencing upon one side and gradually extending over the whole system, would fix and hold for several seconds every muscle; respiration, and as far as could be discovered, the circulation for the time cease, the patient being immovably fixed, often times in very unnatural position; at length the spasm would gradually relax, a deep inspiration would follow, and a profound sleep or coma would succeed, from which he could not be aroused, but which would pass away, leaving him as before, the whole process lasting half an hour or more.

In a few weeks he visited this city, and while here there was sudden increase of the paralysis of left side. After again returning to his home he was attacked by some acute disease of the throat, which made him very sick, as reported by his wife; during this sickness, and after being unable to speak for two months, he was altogether overjoyed to find on awak-

ing one morning, that he could speak quite plainly. This is the point of especial interest, and the reason for relating what would otherwise seem unworthy of mention.

Cerebral effusion is supposed not unfrequently to occur in the course of convulsions, especially puerperal convulsions and epilepsy, the congestion which is produced, acting as a most efficient cause. Possibly the true character of this attack has not been apprehended, and it may be differently regarded by equally accurate observers. It is difficult to satisfactorily explain the sudden restoration of speech, upon the ground of absorption of effusion, and equally difficult to account for the phenomena observed, upon any other hypothesis than that of congestion, producing pressure and loss of function, or effusion of either blood or serum.

Prof. White remarked that the subject of serous apoplexy, interested him greatly; recollected visiting, the first year of his medical practice, a man at the Old Eagle Tavern, who had apoplexy. He had been riding for several days and nights; was greatly exhausted, and unquestionably had serous effusion. The patient was bled largely; the practice was approved by his preceptors, and the young physician was highly commended for his energetic and heroic conduct, his active and vigorous treatment; he has long since come to regard it as exceedingly inappropriate. Dr. W. also spoke briefly of a case treated by Prof. Flint and himself, where they found on arrival at the bed-side of their patient, a practitioner who had been temporarily called, bleeding the patient in a full stream; insisted upon the immediate closure of the vein; regarded it as a case of serous effusion; the patient died. From that time to the present, has made a wide distinction in cases of apoplexy, and desired to call the attention of the profession to the fact, that anemic females were very liable to one form of the disease. Expressed the fear that many physicians were not even now sufficiently aware of the impropriety of indiscriminate bleeding, in cases of this description, or did not carefully discriminate between serous and bloody effusion.

Prof. White reported a case of adhesion of the lips of the uterine outlet from inflammation, occasioned by mechanical irritation in an attempt to procure abortion.

M. W. at the Buffalo Lying-in-Asylum, Oct. 17, unmarried; first pregnancy; menstruated last about the first of January, 1861; quickened in May, and expects to be confined in the latter part of October. She confesses to having used a large wire or rod of iron, when three or four months advanced in

her pregnancy, for the purpose of procuring an abortion. Says "when the wire was introduced some blood followed immediately, and this flowing was soon succeeded by great pain and tenderness in the lower abdominal region, as well as heat and discharge from the genitalia.

September 24—The Sister in charge of the ward informs me that Mary has had pains most of the night, and that they are now quite severe. Upon instituting a vaginal examination, no opening could be found in the lower segment of the uterus. By carrying the fingers carefully up to the junction of the uterus with the vagina posteriorly, and bringing them anteriorly to the pelvic symphysis, there could be found only a slight inequality—a slight elevation of cicatrix, in the lower surface of the uterine tumor. The stethoscope applied to the abdomen showed the fetal heart to be distinctly heard below the umbilicus, upon the left side, and quite low down, and she has all the ordinary indications of having matured her pregnancy. A dose of castor oil was administered, which moved the bowels freely. During the succeeding day and night the pains continued without abatement, and on the 25th found her quite exhausted with fatigue and sleeplessness. The parts continued without change, except that the uterine neck had been pushed somewhat farther down into the pelvis. In the hope that nature, unassisted, would eventually break up the adhesions between the uterine lips and save the necessity of any operative procedure, I directed a large anodyne enema to be given. The pains were lessened, and the patient was able to obtain some refreshing sleep, and take a little nourishment.

During the next three weeks she continued to have recurrences of severe pains, which were permitted to continue until her strength began to fail, when the effort would be made again to control them by anodynes. It required a grain of morphine, and this had sometimes to be repeated, before the gravity of these pains could be so far lessened as to procure sleep. Quinine and beef essence were freely given, and as the pulse and exhaustion did not indicate the danger imminent, interference was postponed from day to day, awaiting an emergency which would demand immediate action. Meantime she was visited by several medical gentlemen, among the number my colleague, Prof. Rochester, who on several occasions made unsuccessful efforts to detect an opening in the lower segment of the uterus.

At length the 16th of October, and the 22d day after the

commencement of labor pains, having resolved that something must be done for her relief, I again made a careful vaginal examination. Placing the finger upon what seemed the cicatrix of the os, I made steady, continuous pressure for some time. Upon the recurrence of the pain the pressure was increased until finally the adhesions gave way and permitted the finger to pass into the cavity. She was then left with directions to be sustained by beef essence and brandy until the next morning. Upon examination on the 17th, the orifice was found one and a half or two inches in diameter, though yet rigid and cartilaginous. At 3 P. M. the head had cleared the os and descended into the pelvic cavity. The pains being now inefficient and the woman much exhausted, the labor was completed with forceps, the patient being first brought under the influence of chloroform. She was safely delivered of a male child, weighing 10 lbs., the skull firmly ossified, and presenting all the appearance of a child a month old. From this time, nothing unusual occurred, the woman convalesced rapidly, and both mother and child are now ready to be sent out of the Asylum.

This case suggests several points of interest. In the first place, there can be, in my mind, little doubt that the occlusion was occasioned by the inflammation, superinduced by the mechanical efforts to procure abortion. How often this danger may be incident to the reprehensible, (though truth demands we should add not unfrequent,) resort to such means for procuring abortion, it would be difficult to estimate.

Not the least interesting point illustrated by this case, is the absence of danger attending delay in the first stage of labor. For more than three weeks was this woman scarcely free from pain for a moment, and then only partially quieted by large doses of opium, and much of the time she was suffering severely, and yet her labor terminates safely to both mother and child. Had the head descended into the pelvic cavity and entered fully upon the second stage of labor, it could not have been delayed one-fortieth part of that time, without endangering the integrity of the maternal tissues lining that cavity, and threatening the life of the child from pressure upon the head.

It will be remembered by several of the members of this Society, that some years since I reported two cases of complete occlusion of the uterus. One of these occurred in the practice of Dr. Charles H. Wilcox, and the other was under the care of Dr. Baker. In both, surgical interference was

rendered necessary, and successfully resorted to at a much earlier period. The instance just related will scarcely form a precedent which it would be safe in all cases to follow. It will, however, always be well to delay any incisions through the occluded neck, in the hope that nature herself may open the way, until symptoms are present requiring our interference.

Dr. White called the attention of the Society to the use of "sponge tents," for dilating stricture of the rectum. He had recently resorted to them in the following case, with very gratifying results, and hoped upon further trial by the members of the Society, they might be found useful in many cases of simple stricture, non-malignant in character, and situated near the arms.

Mrs. W., aet 26, was married at 16, had her first child after a severe labor at 19 years of age. Her convalescence was protracted, during which she suffered from pelvic abscess which left her with *fistula in ano*. Two years subsequently she was operated upon for fistula by Dr. Bigelow, of Boston, with entire relief. Since that time she has been troubled with difficult defecation, growing more and more annoying until now, the fecal matter can be expelled only by great effort, and after taking large warm water injections. When the stools are so consistent as to be moulded by the stricture, they are not larger than a "pipe stem," and are expelled with the utmost difficulty. Her general health has become gradually impaired during the last year, and she now consults me for relief.

Upon making a digital examination of the rectum, a soft stricture is found two or two and one half inches above the sphincter and just at the point where the incision seems to have been made for the cure of fistula. The point of the finger could not be inserted into it by any amount of pressure which the patient could endure. Being in the habit of using sponge tents for dilating the neck of the uterus, it occurred to me that they might be made available for the purpose of dilating rectal contractions. Accordingly I inserted a large and long uterine tent, as far as possible into the stricture; this tent was not more than three lines in diameter; directed her to sit down in a warm bath. In thus supplying warm water to the outer extremity of the tent, instead of waiting for the purulent fluids from above to be first absorbed and enlarge the upper end, the difficulty of withdrawal was obviated. The result was highly satisfactory. The tent gradually expanded from below, and so gently, that, soothed by

the warm water, she was able to permit its complete expansion before she withdrew it. The relief was so manifest, I was induced the second day after to insert a tent four or five times its diameter, and very firmly made. This, like the preceding, was permitted to completely unfold before removal, and considerably increased the dilatation of the stricture. Two days subsequently a tent, measuring a little more than half an inch where it occupied the stricture, was in the same manner introduced and soaked with water until fully expanded. Some difficulty was experienced by the patient in withdrawing the tent on this occasion, in consequence of the part of the tent situated above the stricture becoming saturated and fully expanded. The finger could now be easily passed completely through the stricture, and the indurated edges were found greatly softened and absorbed. She was now furnished with a rectum bougie, the diameter of which is more than an inch at the point where it engages in the stricture, and directed to insert it frequently to prevent its recontraction. The patient believed herself completely relieved of the local difficulty, and her general health is greatly improved.

Dr. White closed his remarks by expressing the hope that other members of the Society would be induced to make trial of the tents in analogous cases, as he was aware that nothing could be established by a single case, but confessed to great confidence in the success of the plan here adopted.

Dr. Miner thought the means adopted by Prof. White for dilating stricture of the rectum ingenious, philosophical and efficient, certainly in the hands of Dr. White. Had never been greatly pleased with the sponge as a dilating instrument; could not think that the expanding force of a dry sponge from the absorption of moisture could be very great; had never been able to introduce sponge with sufficient force without its bending or breaking; had often thought a conical instrument made of soft rubber more cleanly, durable and efficient. Spoke of the readiness and rapidity with which absorption of the fibrinous deposit, which the usual cause of stricture, would sometimes take place, especially in the urethra, when an instrument was passed down so as to press somewhat upon it, even though no dilating process is instituted. Could not offer any experience in the treatment of stricture of the rectum, since it was one of the rarest forms of disease, disconnected with scirrhus, and based his remarks upon his observation in stricture of urethra, which had many features in common with it. Stricture of the rectum treated

successfully by whatever means adopted, is of interest and importance, such disease being generally very intractable, it being difficult to obtain complete and permanent relief.

Dr. Kempson would quite agree with the remarks of Dr. Miner, that the relation of this case in which the ingenious application of sponge as a dilating medium in the stricture of the rectum, might result in the formation of a very useful instrument by bringing to its aid India rubber. Thought a hollow elastic tube, filled with dry sponge, cut to the proper size, would be easier introduced than sponge alone, and moisture would compel the tube to expand. Dr. K. also related a case of severe injury of the rectum, observed by him while a student of medicine in Kidderminster, England. A robust young man fell backwards upon an inverted blacking pot, while in the act of relieving his bowels, with such force as to completely drive it within the rectum beyond the reach of the fingers; the pot was one and a half inches at the top and one inch at the bottom in diameter, and about three inches high, every effort to extract having failed, the pot was broken and the pieces very carefully removed. The next morning violent inflammation set in; he was bled largely, and at intervals as many as 60 leeches were applied; however, he sank rapidly, and died, in fifty hours after the accident. Dr. K. would ask if it had not occurred to any one present, that cases of imperforate os-uteri were sometimes produced intentionally by the manipulations of physicians, who do not hesitate to depart from the legitimate object of our art, and in order to pander to the lascivious desire of their patients, and allow them freely to indulge in illicit intercourse, have recourse to various methods to bring on adhesive inflammation of the womb and produce a complete closure of the orifice. This is done under the guise of healing ulceration of the neck of the womb, &c., and these cases constitute the great bulk of the practice of a Canadian practitioner who enjoys a high reputation among the best classes of Canada; at least so he is told. If it is so, hoped that these remarks might reach his ear, or his eye, that he may desist from such diabolical practice.—*Buffalo Reporter.*

VARIATIONS OF ANIMAL HEAT AS A CAUSE OF DISEASE.

"TAKING COLD."—ARTIFICIAL WARMTH.

From Dr. Ware's Lectures on General Therapeutics

The remarks that have been made on certain states of the skin, naturally bring us to the subject of animal heat, the variations of which are chiefly connected with the skin and its sensations, whilst the influence of cold on these variations and consequently on the production, phenomena and course of disease, is constantly to be taken into view in its treatment. Although it is universally conceded that exposure in various ways to external temperature, is one of the most efficient causes of disturbances of the health, we know very little of the laws according to which this takes place. In common opinion nothing is regarded as more certain than that disease is constantly produced, and that the symptoms of disease are constantly modified, by what is familiarly spoken of as "taking cold." Yet almost no exact knowledge is possessed of the mode in which this effect is brought about, or of the conditions of the body itself, or of the external agents on which it is supposed to depend. The common notions so confidently entertained concerning the whole matter afford us one of the most remarkable of the examples, only too common, in which we mistake the habitual use of certain forms of expression, which have become familiar, but to which we attach no definite idea, for a clear comprehension of the subject to which they relate.

The easy solution thus resorted to for the purpose of explaining the effects of "taking cold," is used on occasions of the most opposite kinds, and for very different diseases. It is employed without at all understanding the manner in which the animal heat is modified by the circumstances of the exposure, or of the manner in which the modification operates to the production of disease. The most common idea is that we take cold by the withdrawal, in some way, of the heat of the body. Yet it is manifest that this withdrawal takes place in such a different manner, in such a different degree, and under such different conditions, that there can be no uniformity in its *modus operandi* as a cause. Whilst, on the one hand,

the same disease is produced by very different modes of exposure, on the other, the same mode of exposure will in other cases produce very different forms of disease. Thus, in one case where cold is taken, there has been but a momentary exposure of a small part of the body to a cause which can produce but a very slight loss of animal heat, as a draught of cold air; in another, a large quantity has been abstracted from the whole surface, as by remaining a long time in the water, or exposed to a high cold wind; in another case, no assignable impression of the kind has taken place at all, and yet, in each, disease has been produced. Colds, of apparently the same character, prevail under circumstances the most diverse, as in cold weather and warm weather, in dry weather and damp, in uniform weather and in variable, in one kind of season and in its opposite.

The most reliable results we can extract from the vague mass of observation on this subject are, that sudden exposure, especially when the body has been much heated, the skin is in an excited state, and the body is insufficiently or less than habitually clothed, or when the weather has suddenly changed from warm to cold, or from cold to warm, is a condition under which the cases we attribute to cold are very likely to arise; that the gradual, and still more the rapid abstraction of large quantities of animal heat, however this is brought about, are also likely to produce disease, but in this case of a more deep-seated, continuous and obstinate character, though not always more violent; but that the most extensive, though less obvious injurious effects of cold are found among those who are exposed through long and inclement seasons, with deficient protection by habitations, clothing and fuel, especially among the young. It is to be observed, however, that there is no uniformity in the degree or kind of the effects which are thus produced, and that it is but a limited proportion of the persons exposed to these causes who are unfavorably affected by them. Hence we are obliged to infer that we can justly consider the disturbance of the animal heat as constituting but one of the conditions upon which depends the origin of the diseases usually attributed to taking cold.

We are not likely, then, to derive any considerable aid in the direction of treatment from our knowledge of the connection of the scientific history of animal heat with the production of disease, and we are obliged to depend mainly on the teachings of observation and experiment. In the early stages of acute diseases, there is usually some over-production or ac-

cumulation of animal heat; this, when excessive, causes no little suffering and restlessness; and many of the other troublesome symptoms of the febrile condition seem closely associated with it, such as headache, pains in the back and limbs, want of sleep, and thirst. Whether the accumulation of heat is the cause of these other symptoms or not, it is very certain that the alleviation of the heat of the skin by cool air, cool sponging, the application of cold cloths or ice to the parts most affected, and cool drinks, not only give relief to the sensation of heat, but tend also to mitigate the other febrile symptoms. How much this relief actually contributes to the removal of disease, we cannot say, but the quieting of pain and thirst and the production of sleep are always important objects to secure.

But throughout some acute diseases, and in the advanced stages of all, there is a diminished production of animal heat. Notwithstanding this, there may still remain a tendency to occasional exacerbations, but more limited in extent and continuance. In such cases the loss of heat becomes exhaustive, and should be guarded against by attention to food, clothing and the other hygienic conditions which will prevent this loss. The warmth of the body, as a whole, is to be watched and maintained. Yet there is in this state of things no inconsistency in the application of means for the relief of the temporary attacks of heat, locally or even generally. The main principle to be held in view, is to prevent that general depression of the powers of the system which is so certainly the result of a permanent draught upon its efforts for keeping up the temperature of the body. The effects of this exhaustion are not always perceived by the sensation of cold, but often by a disturbance of some of the internal functions. Thus, a convalescent will experience a loss of appetite, headache, neuralgic pains, watchfulness, troublesome sleep, as well as other symptoms from a considerable fall of temperature in his chamber, of which he is hardly sensible, but which a careful observation of the cause of the phenomena will satisfy the physician has been due to cold—not to taking cold in the ordinary sense of the word, but to the general depression of vital force due to its disproportioned expenditure in the maintenance of temperature. This especially manifests itself in organs which have been the subjects of the disease, and hence the great relief often experienced from the application of direct warmth, and also of extra clothing, to such parts.

Perhaps the most common mistake in attending to this point, is to overlook the necessity of the access of fresh air to

sick rooms, and to endeavor to maintain their warmth mainly by keeping out of cold air, instead of warming that which is introduced. Breathing cool, or even cold air, is seldom injurious, and carries off but little heat, where it is pure and fresh, if the body be surrounded by a sufficient amount of non-conductors to preserve that which is generated.

It is sometimes observed that the external surface of the body is cool, while the patient experiences the sensation of heat. This is often noticed in common cases in a slight degree, but in some violent diseases it is exhibited in a very striking degree. The skin of the patient is cold, even icy cold, but he seems to himself to be burning with intense heat. No external means will warm the body, except as it will warm a corpse; it even seems more difficult than this—and it becomes cold again, as soon as applications are suspended. There may be an occasional and limited flush of heat, but for the most, the coldness remains till death, when the case is fatal; but then, the surface, which could not be warmed from without, during life, becomes gradually warm from within; and, in some cases certainly, the internal viscera are found very warm, and even at a higher than the normal temperature, if the body be opened. In this singular state of things, most noticeable in cholera, it would seem as if the animal heat was prevented from diffusing itself during life by some modification of the law of conduction dependent upon the presence of vitality, but on the cessation of life is permitted to obey the ordinary conducting powers of the textures.

Every one acquainted with cholera has probably observed, in the collapse of this disease, how useless was the attempt so persistently made to make the patients warm by hot-air baths, hot sand, hot bricks, etc., and how much discomfort was occasioned by the attempt; whilst, on the other hand, how grateful to them was cold sponging, the administration and application of ice, and the free admission of cold air to the skin and lungs, and this although the breath was sometimes itself cool. May it not be that the relief thus experienced has some connection with that modification of the conducting powers of the textures just suggested as a probable explanation of those singular phenomena; and some indirect connection also with the familiar fact that persons or parts which have been chilled or frozen, are more speedily and safely relieved by cold applications than by warm. All such facts probably have a significant relation to the various phenomena of disease connected with cold and heat, and these sensations of the patient; and

also with chilliness, shivering and ague turns, all of which are connected with these sensations, and with various disturbances of the nervous system.

In chronic diseases, the management in reference to animal heat enters more universally into the plan of treatment than in acute. In acute it is rather incidental; in chronic it is fundamental. A due equilibrium between the production and transmission of heat is essential to the perfect performance of all those functions on which, as formerly stated, the processes of recovery depend. The regulation of all the habits of life as to clothing, habitations, artificial warmth, climate, exposure, air and exercise, have some connection with the maintenance of this equilibrium, and although in a state of health, and to a certain degree under disease, we can endure a certain amount of departure from it, yet, in proportion as disease is present, the capacity for this endurance is diminished, and it becomes important to prevent the unfavorable effects of it. In a majority of chronic diseases, the heat-making and cold-resisting capacity appears to be impaired, and since, partly as the consequence, exhaustion, debility, and a defect in the power of recovery are the prevailing tendencies of these diseases, the regulation of all the habits which relate to this point should be a constant subject of regard.

Under the ordinary exposure of mankind, even in the hottest climates, the current of heat is from within outward, and it rarely happens that we do not part with more heat than we receive. In some seasons and in some countries the quantity lost is small, and of course there must be a large check upon those vital operations by which heat is developed. This check, however, seems to be, taken alone, seldom injurious, and the diseases of hot climates, so far as we can refer them to the influence of accumulated heat, are few as compared with those of cold. It is notorious that hot climates and hot seasons are healthy, except so far as we can trace the origin of disease to causes generated by the action of heat upon substances outside of the human body. But it is not so with influence of cold, for although many other causes co-operate with and intensify its agency, we yet know that by itself alone it deteriorates health and produces disease.

In managing most chronic diseases, therefore, it is the demand upon the body for its heat, and the necessity of arranging the habits of the patient with a view to this, that we have to consider. Not only the ordinary demand for the evolution of heat continues, but generally a diminished capacity exists

for this evolution, and consequently a liability to be injured and exhausted by it, which does not exist in health. Doubtless there is a great difference in the power of different individuals in this respect, but there are few in whom the capacity for resisting cold is not diminished by all chronic disease. In practice, it is always safest to err on the side of too much precaution than too little, especially in the matter of clothing. Persons will often suffer in their sensations from too much, but rarely in their diseases.

This is true even of the general clothing of individuals in temperate climates in health; and I believe it to be a fact, and an important one, that the most common fault in such climates is to endeavor to get along with too little clothing, and that it is really a safer rule to wear as much clothing as we can bear without discomfort, than as little as we can without it. Doubtless there are individuals with regard to whom this is not true, and cases in which they are exhausted and debilitated by much clothing, whilst they are refreshed and invigorated by diminishing it. But this I am convinced, after long attention to the point, is rather exceptional, and yet frequent enough to make a due regard to it proper in every case. There are many general rules in practice, but no universal ones, and this is so here.

I can only now state this general principle of the sanative effects of preventing the dispersion of the animal heat. Its practical management runs out into so many details which require to be modified by constitution, circumstances of exposure, and character and stage of disease, that they must be left to the knowledge and good sense of each practitioner. The greatest error perhas on this point arises from the disposition to substitute external warmth by artificial heat, and the exclusion of air and confinement within doors, for adequate clothing. The effect of this error is to deprive patients with chronic diseases, and even persons with simply feeble health, of the invigorating influence of external air. Bad and variable as our climate is, there are few individuals who may not, by the careful and gradual cultivation of the habit, acquire the power of going abroad in all seasons and almost all weathers, not only without danger but with positive benefit. More persons induce imperfect health by the habits of seclusion engendered by the fear of taking cold, than are actually injured by taking cold. No doubt an artificial state of the system in this particular is produced in many persons, and no sudden change of habit would be safe. Their management

should be cautious and delicate, but there are probably few in whom the change might not be brought about. This is even true of a class of complaints—those of the throat and lungs—usually regarded as peculiarly liable to injury from exposure. The use of the respirator is especially valuable in such cases and is almost universally sufficient to prevent injury. Even the irritating and harassing influence of the east winds of spring is thus signally mitigated. This instrument is also capable of performing an important office in husbanding the animal heat, and many persons are thus kept warm by it and secured from the influence of cold, by a much less amount of protection than would otherwise suffice.

The application of artificial heat to particular organs, and also the prevention of the escape of the natural heat from them, is often found of important aid in relieving many of the sensations of disease, and probably also in promoting their recovery. A diseased organ, as well as a diseased system, may be unfavorably affected by the exhaustion of its heat, and derive a consequent benefit by preventing it. I have already referred to the good effects of guarding organs which have suffered from acute disease, or exposure during convalescence. The examples of a corresponding advantage to organs affected with chronic disease are even more numerous. Local pains, both rheumatic neuralgic and from chronic inflammation, affections of the kidneys, bowels and uterus, and many of the throat and lungs, furnish numerous examples of this sort.

It is obvious how many other particulars of treatment are suggested by these considerations, and yet how impracticable it is to enter into them in a consideration whose object is to illustrate merely the principles upon which treatment is to be conducted, and not to enter into a full account of its details.

—*Boston Medical Journal.*

NATURE AND ART IN THE CURE OF DISEASE.

“Another insidious and plausible mode of discountenancing the use of drugs is to represent them as ‘unnatural,’ and to speak of ‘Nature and Art in the cure of disease,’ as if there were some antagonism between them, and as if the use of drugs were artificial, and, if so, reprehensible.

"Just as one portion of popular error arises from ignorance of facts, so does another and more inveterate set of errors arise from the use of words. 'Nature,' for example, is a word that is incessantly quoted. It is 'natural,' we are told, to wear the beard; 'natural' to drink when thirsty; 'natural' for mothers to suckle their infants; and, as the authors of two-penny treatises and lecturers on diet never fail to tell us, it is 'natural' to eat brown bread. Popular books on medicine are rich in this sort of practical joke, if we may call anything a joke that destroys human life, for we hold that bad logic destroys more lives than gunpowder. For example: one of the popular books on medicine which we reviewed lately (and by no means the worst of them) contained a story such as this:—'A monthly nurse once asked me, if she should give some gruel to a newly-born infant. I replied, "Now don't you think, nurse, that if *Nature had intended* it to have gruel, the child would have been born with a bottle of gruel round its neck?"' This poor woman of course was vanquished by this precious piece of argument; yet she might fairly have asked, in return, had Nature intended the cord to be divided; had she meant the child to be washed and dressed, and whether scissors, thread, hot water, soap, sponge, violet-powder, and cambric chemisettes might not have been objected to on the ground of unnaturalness, quite as much as gruel. The fact is, that the word *Nature* is used to signify at least two independent ideas. One is that brute, naked state in which any given thing happens to be found without interference or improvement by the hand of man: *a state of Nature* as it is called. The other meaning includes the whole faculties and capabilities, including the circumstances favorable to full and luxuriant growth and development. Thus, man in a state of Nature (to use the word in one sense) is a filthy, stinking, verminous savage, thoroughly selfish and utterly deficient in those finer feelings of love for parents and children which we, educated under the influence of Christianity, are wont to call 'natural affections.' But the nature of man (to use the word in the other sense), includes the possession of conscience and reason, which teach him to check mere brutal instincts, and prompt him to explore, subdue and utilize all the objects he meets with, and to employ them in such a way as to produce for himself the greatest amount of beauty, comfort, health and strength. Hence to denounce or sneer at, as *unnatural*, the use of drugs, which man's instincts prompt him to seek, and his intellect enables him to find, is a monstrous and mis-

chievous perversity. But so it is. A patient in a well-built house, in a comfortable bed, fed with food and clothed with textures from all quarters of the globe, and dependent for his comforts, and even his life, on the accumulated products of centuries of human art, is supposed to be treated *naturally* if he takes no medicine: the case is 'left to Nature;' but if any of those beneficent means be used which have also been slowly gathered together during the progress of human civilization—leeches, for example, to take a little blood where it is superfluous; anodynes to procure sleep, or aperients to empty the bowels—forsooth this is unnatural and artificial! and therefore suspicious if not positively wrong.

"Let us say, emphatically, to administer drugs out of mere routine is contemptible. To give unnecessary medicines for the sake of adding to professional profit is degrading. The rash and blindfold heroic practice of giving active remedies in all cases (whether bleeding or brandy) is dangerous. To neglect air, food and regimen, is to let half our weapons lie idle. But we do desire most earnestly to vindicate and uphold the rational and temperate use of those drugs which are employed in ordinary practice; because they can produce effects quickly, which cannot be obtained quickly from rest, diet, or other appliances, and because human suffering may be enormously mitigated by them. Whilst we get rid of the old apothecary traditions, let us avoid that half-indolent, half-skeptical spirit that would rob us of some of our most valuable instruments, and encourage the public in prejudices that have been but too successfully instilled by our adversaries. Let us study the practical art of healing, and the uses of drugs especially, for, in the words of the author of Ecclesiasticus, 'He that is wise will not despise them.'—*London Med. Times & Gazette*.

RESEARCHES ON THE DEVELOPMENT OF TUBERCULOUS MATTER.

By DR. LAVARAU,
Professor in Val-de-Grace.

Microscopical studies have followed, in France and Germany, two different paths. Less prompt in making use of this marvellous means of analysis, we have applied it with a sort of distrust which has kept us in the circle of precise determina-

tions; in Germany the same success of microscopy seems to have drawn many into the error of attributing to theoretic explanations, founded on a progressive science, the value of the facts which only owe their importance to the method which has produced them. For our neighbors, the cell is the point of departure for all organic processes, the centre of a local irritability and a circulation more wonderful than that of the absorbent and exhalent vessels of Bichat,—and in fine a being in a being, since the cell partakes with the egg and grain of seed the characteristic of being produced always from a pre-existing cell. *Omnis cellula a cellula* is henceforth the formula of a new medical doctrine which excludes all interpretation borrowed from the doctrine of exhalation and hyperæmia. Like everything which emanates from its author, the cellular doctrine is as remarkable for the ingenuity of the views as for the truth of the observation. It furnishes numerous and important facts, gives a more complete knowledge of the inflammatory process, and the relations of pathological formations with normal nutrition; but it seems to us to serve in suppressing from physiology hyperæmia and hypercrinia. How can we explain the fibrinous formations on the mucous and serous membranes without a physiological interpretation as well founded as that which invokes conditions of irritation in the cells themselves? How are we, in taking no account of it in tuberculization, or rather in passing by a doctrine so important without examination, or adopting it without submitting it to a sufficient criticism? I have, therefore, thought that the subject of tubercle one of the anatomo-pathological questions the most worthy of interest, would not be uninteresting in presence of the cellular doctrine.

Opinion of Authors on Development of Tubercle.—The opinions on the mode of development of tubercle may be reported in two different points of view. For one party, tubercle is the product of a morbid exudation; for the other, the consequence of atrophic degeneration of the normal elements of our tissues. The first opinion is generally that of the French physicians, and of German physicians of the Vienna school, and of some English physicians, as Bennett, Ancell. MM. Andral, Lebert and Mandl consider tubercle as a product of secretion. "After its excretion, tubercle takes at first a compact form," says Lebert. "We may affirm," says Mandl, "the tuberculous matter was primarily liquid; coagulation takes place immediately after exudation." Ac-

cording to Gerber, fibrinous tubercle comes from exuded plastic matter which has not been reabsorbed nor transformed into pus. "With regard to the origin of tubercle," says Vogel, "we can not doubt that the substance which produces it may be furnished in the liquid state by the capillary vessels." Albers and Czermack hold the same opinion. Rokitansky considers tubercle as produced by the exudation of a particular nature.

Metamorphosis.—The opinion which attributes the development of tubercle to the atrophic metamorphosis of the elements of our tissues has been introduced into our science by Henle in Germany, and Addison in England. Henle applies to tubercle the opinion emitted by Muller on cancer; viz: that the formations are composed of primary cells, more or less altered. Addison attributes the production of tubercle to the metamorphosis of the white globules of the blood. When the normal elements undergo their metamorphosis in an incomplete manner, the normal products are replaced by those of a retrograde nature. M. Kuss, of Strasburgh, has published in France the ideas of the German school. He expresses his opinion in the following language:

"In the beginning, the epithelial globule preserves its principal optic properties—it remains transparent; from this the initial forms of grey granulation, of infiltrated gelatinous tubercle. Later, the slow accumulation compresses, wears out and causes the skeleton of the lungs to disappear; that is to say, the vascular membrane of the cells, then the epithelial globule, after a certain lapse of time, dies, mummifies, shrivels, changes its optic properties, and becomes more opaque. It is this form which has been taken for the corpuscles of tubercle. As to tubercle of other organs, it is also the result of mummification of normal tissues under the form of elementary globules. We may then define tuberculization, the death and the mummification of a normal tissue, or accidentally characterized by small globules like to those of the pulmonary parenchyma of the kind that Henle calls *elementary corpuscles*."

For Reinhardt, tubercle is the product of fatty degeneration of epithelial cells. Shroeder Von der Kolk considers yellow tubercle the result of the swelling of the epithelial cells by plastic matter. Finally Virchow attaches to this opinion the authority of his name in different publications, especially in his *Cellular Anatomy*, on page 399. In my opinion, says Virchow, tubercle is a granule, or a knot, and this knot con-

stitutes a new formation, which at the moment of its first development possesses necessarily the cellular structure, and springs, like the other new formations, from the connective tissue. When this new formation has arrived at a certain stage of its development, it shows, in the middle of the normal tissue which it occupies, a small prominent knot composed of small cells with one or several nuclei. That which characterizes especially the new formation is its richness in nuclei, and when we observe it in the surface of the tissue we see almost nothing but nuclei. If we isolate these products, we find either small elements with nuclei so small that the membrane lies directly in contact with the nuclei, or more voluminous cells, in which the nuclei are divided, and may be seen to the number of twelve, twenty-four, or thirty, in a single cell; the nuclei are small, homogeneous, and of an aspect but slightly shining. This stricture, which in its development is comparatively most nearly related to pus, inasmuch as it has the smallest nuclei and relatively the smallest cells, is distinguished from all the more highly organized form of cancer, caneroid and sarcoma, by the circumstance that these contain large, voluminous—nay, often gigantic—corpuscles with highly developed nuclei. Tubercle, on the contrary, is always a pitiful production, a new formation from its very outset miserable.

The difference of opinions on the question of pathologico-physiology relative to the development of tubercle is equally exhibited on the question of its nature and appearance.

Organized Product.—For one party, tubercle is organized, containing cells with nuclei. Geber distinguishes non-organized albuminous tubercles from fibrinous tubercles constituted by tubercles containing cells with a nuclei having the power to organize themselves into fibres. Gellerstedt considers tubercle as living the same life as tissues deprived of capillaries, as the nails and hair.

For Rokitansky, tubercle forms the transition of non-organized to the organized productions. Schroder Von der Kolk believes, that grey tubercle may transform itself into cellular fibres.

Non-Organized Product.—The largest number of microscopists regard tubercle as a product of excretion, presenting no one of the attributes of organization. For Koestlin, tubercle never raises itself beyond an inferior degree of organization of an amorphous substance containing nuclear elements. This is also the opinion of John Simon, Henle, Kuss

and Virchow, who regards it as the product of decomposition of normal cells; and especially of M. Mandl, who sums up his opinion on its pathological anatomy in the following language:

"The tuberculous matter is not composed of elements which may increase and develop themselves. The multiplications and increase of tubercles can not consequently be explained except by juxtaposition. Tuberculous matter is a non-organized amorphous matter."

Aspect of Tuberculous Matter.—For one party, tubercle is characterized by a special histological element; for the other, by the amorphous matter. In the first party are found Kuhn, Gluge, and especially M. Lebert, who attributes to tubercle—1st, elementary granules; 2nd, a solid amorphous blastema; 3d, characteristic cells. In crude tubercle the tuberculous globule offers irregular outlines, approaching either a spherical or an oval form; it is ordinarily irregular, angular, polyhedral, with rounded angles and corners of a diameter of 0.005 to 0.0075, approaching rarely to 0.01. According to Paget, Madden admit the reality of characteristic globules—Bennett only giving a diameter to the tuberculous globules of 0.01. According to Paget, it is formed of fatty granules, of nuclei of different aspects, and finally by veritable cells, which are only epithelial cells transformed into tuberculous cells.

Amorphous Substance.—Koestlin, of Stuttgart, Rokitsansky, and M. Mandl admit that the tuberculous substance is contributed by an amorphous blastema, containing or not containing altered cells. Tubercle, according to Virchow, has no characteristic element, properly so called; the atrophied nuclei which result from the decomposition of the cells are the only elements which maintain their characteristics. According to M. Mandel, "the tuberculous substance is an amorphous mass studded with fatty molecules, finely granulated, cohering at the beginning of its existence, defluent later." The fragments of this substance presents neither determined forms nor sizes. Particular tubercular globules or corpuscles have no existence.

In the face of views and opinions so different and opposite, I shall try to give my own opinion on this, one of the most important questions in pathological anatomy.

Personal Observations and Reflections.—Tubercle in its first stage of development is constituted by a grey homogeneous substance, whitish, elastic, developed either on some isolated point of the organism, oftenest producing itself, like the disseminative inflammations (dothin-enteritis, variola), on a great

number of points at once, without being characteristic of tubercle, as of cancer and pus; that this dissemination of the pathological product may appear consecutive to a secondary process of reabsorption or to any other mode or reproduction, the simultaneous evolution of the tuberculization being evidence neither of an alteration of the blood nor of the nutritive fluid.

Tubercle does not develop itself in all the tissues nor in all the organs. Differing from pus and cancer, it never commences in the epithelial cells; it does not develop itself in the muscular tissue, nor perhaps in the nervous tissue, nor in points of the consecutive tissue, where the fibres form compact fascicula, as in the tendons, the aponeuroses, and the skin—however, these are precisely the parts of this tissue where the plasmatic cells take their greatest development. Generally we observe it in the organs where there exists a vascular network with thin sides, in connection with physiological exudation, with gaseous endosmose where from easy communication, as in the lungs, the lymphatic vessels, the follicles, and the plates of Peyer, veritable lymphatic glands flattened according to Brucke, who has observed the same globules in in their interior, as in the ganglions, the serene membranes, and finally in the kidneys and testicles.

Tubercle is rare in the liver, which, perhaps on account of the capsule of Glisson, partakes with the most part of the grape-like glands the character of being rarely attacked with this kind of lesion, without our being able to attribute to something else than the predominance of fibrous element the absence of a product which develops itself so frequently in the glands of the large intestines and the glands of Lieberkühn, so like by the general disposition of the grape-like glands to the greatest fibrous development, as the salivary and mammary glands. In this point of view we very easily perceive a certain relation between tuberculization and the existence of a system of vessels abundantly disposed, as to their walls, for a destination either of gaseous endosmose or secretory excretion. Bennett, in England, has been struck with this relation; he considers tubercle as a product of exhalation in the parts where the vessels present the least consistence. On the other hand, Baron, in England, M. Cruveilhier and Becquerel, in France, have insisted on the relations of adhesion and proximity which exist between tubercle and the venous vascular system; relations perceptible to the eye on the meninges, since it is universally admitted at present that the tuberculous granulations of the pia-mater have their seat

in the inferior cerebral veins, anterior and median, and the cerebellar; and that we may observe equally through a magnifying glass on a layer of the spleen and the cortical tissue of the kidney, which becomes very apparent when there exists at the same time pulmonary granulations and an œdema of the lungs; we may then by scraping raise veinous portions which sustain grape-like clusters of granulations manifestly adherent. Blainville regarded fat as furnished by the black blood, and exhaled through the sides of the veins. He was led to this opinion by the attentive observation of the manner in which fat is distributed in the epiploon. It is difficult not to remember the opinion of the ingenious physiologist in studying the relations with the veins of tubercles, which contain so much fatty matter. Moreover, the impermeability of tubercles to fine injections, tried in vain by MM. Natalis-Guillot and William Starck; the frequency of hæmorrhages and dropsies determined by this lesion, confirm the existence of certain relations between tubercle and the vascular system.

Let us see what the microscope reveals. The microscopists have advanced different opinions on the anatomical element which serves for the support of the tuberculous substance. According to Lebert, (*Anatomie Pathologie*,) tubercle develops itself sometimes in the intervesicular tissue, sometimes in the vesicles themselves. According to Schroeder Von der Kolk, grey tubercle is seated in the interstitial tissue of the lungs, and the yellow in the interior of the vesicles. MM. Kuss and Reinhardt place their seat in the interior of the cells. Virchow admits that tubercle develops itself equally in pathological and normal tissues, in the transitory cellular parts as well as the permanent fibrous organs. Robert Carswell holds that the free surfaces of the mucous membranes serve as the principal seat for the development of tubercle; he comprises under the name of free surfaces the bottom of the cul-de-sac of tubular glands. Finally, Mandl regards the tuberculous plasma as having the power to infiltrate itself between all the elements of the pulmonary tissue and penetrate into their intimate structure.

For more than ten years that I have examined all the aspects of the question of tuberculization, I have found no fact which permits me to doubt that tubercle may have its seat elsewhere than in the interstitial tissue of the lungs. If tubercle develops itself either in the interior of the vesicles or in the thickness of the epithelial cells, we find it in the thickness of the granulations, or in the fasciculi of the elastic

fibres which limit the pulmonary cells or the epithelial cells. Now I affirm it is never to be found thus; besides, if we transfer the question on the ground of the serous membranes which the fibrous tissue, no more plated in lobules but spread out in a membrane, the question produces itself with a solution in the most evident manner.

Preparation.—We detach with care a portion of the serous membrane covered with tuberculous granulations as slightly developed as possible, and after having extended it by the aid of pins on a small piece of cork, we submit it to dessication for some hours, taking care to mark by two lines crossing each other, traced with a fine pencil, the precise point of the granulation which, by the drying, confounds itself to the naked eye and magnifying-glass with the surrounding parts. We detach with a very sharp instrument some small bits from both sides, and it is then easy to observe that on the free side the epithelial cells present themselves with their volume and their normal transparency, whilst in carrying under the eyepiece the deeper bits we perceive by the side of the transparent spaces traversed by vessels, spaces whose opaline appearance proves the presence of tuberculous matter. These are not, moreover, ever penetrated by the vessels, which stop at their limit. It is impossible to doubt, after the preceding preparation, that tuberculous matter does not deposit itself on the extremity of the vascular branches in the simple connective tissue (tissue of Reichert), or between the connective fibrilli.

Aspect of Grey Tubercle.—Under a magnifying power of three hundred diameters, a small bit, slightly moistened, covered with an object-glass, and drawn slowly through the field of the eye-glass, offers transparent spaces, with folds simulating fibres, (connective tissue of Reichert,) very distinct fibres, on the track of which appear at distant intervals the cells recognized by Donders, and to which Weber (of Bonn) and Virchow have attached so much importance, and opaline parts corresponding to the presence of tuberculous matter. In lengthening and shortening the focus by gentle movements of the screw, we distinguish, through an opaline granulous blastema, appearances of badly-formed cells, badly circumscribed, of 0^{mm} , 002 to 0^{mm} , 003 of a millimetre, which I compare to similar dispositions which simulate cells in the homogeneous tissue of the accephalocysts, or in the sarcode of the infusoria.

If we submit the preparation for some time to the action of

pure acetic acid, the opaline parts become transparent, presenting superposed lines, simulating fibre; the cells disappear, and drops of fat can be seen swimming around the preparation, varying from 0^{mm}, 04 to 0^{mm}, 02 in diameter. The preparation resembles the aspect of albumino-fibrinous productions, less the leucocysts, and with more fatty drops. The tuberculous drops described by M. Lebert appear to me to belong to a more advanced degree of development, or of degeneration of the tuberculous matter; very characteristic, they appear as small round or oval fragments, with a nucleus, with an elevated contour, affecting an aspect which resembles somewhat the cartilaginous cells. In the tubercle, in process of softening, we find the same globules more isolated on the border of a granulated amorphous mass, containing in its thickness the same globules which we perceive by transparency in moving the eye-piece by the screw. In giving a movement to the parts submitted to observation, we see the globules fly into other fragments, smaller or more voluminous, in such a way as to resemble very much the breaking up of the ice on the surface of a river where the movement of fragments of altered fibrine borrowed from a hematic tumor in process of decomposition takes place.

When the softening is complete, there exists in the middle of the tuberculous fragments leucocysts proceeding, as well as fragments of fibres, from the surrounding tissues.

If from the study of the lesion we seek to advance to the notion of pathological physiology, which can only end in a medical idea, it is indispensable that, conforming to the rules of the method, we should embrace at once all the characters particular to the tubercle, in establishing what is proper to it, and what distinguishes it from other pathological products. Tubercle differs from pus, because pus has for principal element the leucocyst, which belongs to the normal life of blood; that pus, the product of a process of proliferation, which we are able to provoke, develops itself in all the tissues and in all the organs. It differs from cancer, because cancer is organized, that it effects especially the epithelial cells, the grapiform glands, and the fibrous element of the connective tissue.

Cancer appears to attach itself in its development to a state of organic decay (old age). Tubercle seems rather connected with a state of organic evolution. Developed in the organs where there exists an abundant vascular network, it affects in its evolution a great many distinct points, realizing the path-

ological idea of the diathesis. Cancer, on the contrary, at first local, generalizes itself secondarily by a process of resorption or reproduction which resembles rather the idea of cachexia. Cancer, in so much as an organized product, carries in itself the fatal conditions of its increase and of its extension; simple tubercle, a foreign body, may remain without action in the middle of our organs, on which it does not act, moreover, but as an agent of compression or irritation. Cancer does not undergo any other influence in its march and its development than that of individual conditions. Tubercle, although appealable to predispositions of race and family, is submitted in its progress, and probably its evolution, to external modifying causes. We know how fatal the catarrhal constitutions are to tuberculous persons, and we have personally seen how much the conditions which provoke scurvy react fatally on the same patients. Laennec and M. Louis have then justly raised to the rank of disease a lesion, perfectly characterized by its mode of development, its physical aspect, and its progress, which ends either in a calcareous transformation, or in a fatty degeneration, with softening.

If it was permitted us, in our day, not to be carried away in the precise terms of a definition, and allow our thoughts to wander beyond the limits where the knowledge of the times retains us, we would say that tubercle seems to us to be produced by a state of nutritive fluid, which resembles the degree of degradation this fluid undergoes when, being no more represented by the blood, the lymph, and the serosity, which are the three aspects under which it produces itself in the superior animals, it reaches a state of being no longer constituted than by a sarcodic humor containing some plasmic cells. Finally, in every point where tubercle develops itself, the circulation is arrested, irritability is extinguished. Instead of the process of physiological activity and renovation of the parts, an inert mass constitutes itself, and absorbs the normal parts; instead of the interior movement of vital expansion, the normal product increases itself by juxtaposition, to that point, that, acting on the surrounding parts, it becomes for it a cause of destruction.—*Gaz. Hebdomadaire, Sept. 20th.—Translated by Cincinnati Lancet & Observer.*

EDITORIAL AND MISCELLANEOUS.

Ferrocyanide of Potassium.—Dr. Newcomer, in the *Lancet & Observer*, after nineteen years careful observation and experience in the use of prussiate of potash is convinced of its great value as a curative agent.

I will now give in few words the class of cases in which this medicine was first used: Invalids, the largest number females of enfeebled habits, relaxed fibre, languid digestion, flatulent, sour stomach, sleepless, and the train of varied symptoms usually attending such a state of the system. Prominent among others is pain, more or less severe, in the stomach and bowels, in the nerves of the face, forehead, etc., but more severe and constant in the head. The bowels may be regular or contrary-wise; pulse often too quick; always irritable, easily excited, and seldom regular for any length of time; hands and feet cold, or inclined to be so, etc., etc. Such cases often gave me much trouble. Anodynes might afford relief for a time, but the distress caused in other respect is often a bar to their use. Tonics would heat the system, dry the tongue, and excite fever; the usual alterative of little or no effect, and a judicious course of diet and general hygienic rules rarely persisted in long enough to secure good results.

After correcting any marked lesion of function of the liver, stomach or bowels that might exist, I would give prus. potassium, \mathfrak{z} ij., ext. glycyrrhiza, grs. x. to xxx., aqua pura, \mathfrak{z} ij. Dose, half to a whole teaspoonful, every three to six hours, according to the violence of the symptoms or the promptness of the remedy in relieving them. It may here be said the preparatory treatment did the work, but on this point I made many satisfactory trials, and for years past I give the potash as the first and only medicine used in the case.

Females run down from lactation often present the train of symptoms above described. To many patients in this condition two or four ounces of a solution of prus. potassium would be all the medicine given, and yet speedily cured. Some stomachs reject the glycyrrhiza, and then the formula I use is :

Prus. potassium, 3 ij. to iv., essence peppermint, gtt. x. to xxx., aqua distillata, 3 iv. Dose, thirty to sixty drops in elm bark or gum-arabic mucilage, and water. Some take the medicine as it is in a little water.

It is now nineteen years since I began the use of the prus. potassium, and have given it as often as any one preparation of the materia medica, and yet I do not think there was over ten or twelve persons met with who could not take on account of any unpleasant effect on the stomach, bowels or head.

Hundreds are tortured with headache, complaining of no other symptom. Eight out of ten cases of this kind I cure or greatly relieve with this salt, giving in one of the preceding formulas. Neuralgic pains of the face, head or other regions, are often promptly cured by it. In all cases of this nature, the prus. potassium is depended on. A very intelligent lady, who had for a long time suffered much with headache, said this medicine was essentially a headache medicine, it often giving relief from a severe pain in the head in thirty to sixty minutes, without vomiting, purging, or disturbing effects.

As a stomachic or invigorator of digestion, and hence a tonic, it is in my hands oftener used than all other remedies, and with more success."

In a subsequent part of the article he remarks that he omits his observations on the article as a sedative, considering *veratrum viride* a more reliable article of the class.

He disclaims the idea of this medicine being a hobby with him, but invites professional examination of the claims he makes for it.

Without giving it a position in any particular class of the *Materia Medica*, he observes:

"It may be expected that I would class the potassium—assign it place in the materia medica. This I will leave to the next author of such a work. Yet, had I no fear of making this article too long for the editor, much might be said on this head.

I am positive the prussiate of potassium will reduce the pulse, and is so far sedative. It excites the appetite and promotes digestion,—in some instances in a degree not reached by any other article. I use it in many cases as a tonic. In neuralgia and nervous pains of the head, face, and other parts, in "sun-pain," it will give relief; therefore it is an anodyne.

When successful in asthma, as it has been in my hands, it is antispasmodic or alterative. As a restorer of an exhausted system, from lactation or other causes, it is my most certain remedy. In chest difficulties it has done more than the chlorate of potash for me. In a large majority of neuralgic patients it is my first, my last and only medicine.

If any of our professional brethren adopt the *pros. potasium* into the list of their curative agents, I would like at a future period to hear from them, whatever may be their conclusions. I know that men in our profession have their pets or hobby, to which they ascribe virtues that no one else can verify—as Hamilton with purgatives, and a hundred other instances could be found; and I really curious to know how much of all the varied qualities assigned the *prus. pottasium* in this article will be found by others. No one could be more careful than myself, and nineteen years seems to be time enough to establish a truth in therapeutics.”

Cut and Thrust Wounds in the Intestinal Canal.—Dr. B. Weber, in the same journal, after observation and large experience from 1812, says: “All hitherto recommended methods of operation and manipulation to heal wounds of the intestines can not only be entirely dispensed with, but since they do not further the object of healing, they are rather impeding it, and consequently objectionable.”

He asserts that unless the intestine be entirely severed all wounds are immediately closed by its muscular fibres. The object of treatment is to prolong the stage of simple exudation of coagulable lymph until its organization, a period seldom beyond eight or ten days. He directs, therefore, closure of the external wound by sutures, if necessary, to prevent escape of the intestines, and then assiduous application of cold, by cloths frequently wrung out of ice water, by bladders of pounded ice or snow, or, in the absence of these, Schmucker's or other freezing mixtures.

Venesection in plethoric habits. Enemata of mild character, to secure evacuation of the bowels, and generally the antiphlogistic regimen. He observes:

“If the intestinal canal is entirely severed transversely, if

necessary, enlarge the external abdominal wound, and try to bring the eed of the intestinal canal attached to the stomach into the intestinal wound, where it can be fastened by a loop fastened in the mesenteries. The pressure of the intestines generally favors its remaining in place. It is to be particularly taken care that the external serous membrane of the intestinal canal be brought in contact with the edges of the wound of the abdominal integuments, since the inner mucous membrane is unfit for exudation of plastic lymph. By resorting to the above mode of treatment, the worst that can happen is an artificial anus, since by application of a loop to the mesentery the edge of the lower end of the intestine by attraction is brought in contact with the lumen of the upper end, and sometimes a perfect union of both ends is accomplished, and the alvine evacuation which for a period took place unnaturally through the abdominal wound, is going on in a natural way, and the abdominal wound finally will close entirely.

For the latter case I can bring proof in a person treated by me many years ago, in Germany, who is now living in Cincinnati."

Test for Diabetic Sugar.—Dr. Wm. Roberts, of the Manchester Royal Infirmary, publishes in the Edinburgh Medical Journal a simple clinical method of estimating the amount of sugar in diabetic urine. It is exceedingly plain and satisfactory. The method will be appreciated at once by a quotation of brief extent:

"The only instrument needed is the urinometer (with the use of which every practitioner is familiar) and two phials, one of twelve ounces, and the other of four. The principle of the test is most simple. *It is to take the specific gravity of the urine before and after fermentation, and from the loss of density occasioned by the conversion of sugar into carbonic acid and alcohol, to calculate the amount of sugar destroyed.*" A lump of German yeast of the size of a small walnut is added to say four ounces of urine in a twelve ounce phial. This is loosely corked or covered with a slip of glass and allowed to stand twenty-four hours, when the process under the ordinary temperature of living apartments will be complete.

A similar quantity of the urine which has had no yeast added to it, may be kept side by side, and then the density of the two observed. "The difference between the two densities is thus ascertained, and every degree of density lost, indicates one grain per fluid ounce of sugar in the urine."

The practical details are obvious.

Holloway's Pills.—The formula for this much be-advertised nostrum is, R—Aloes grs. lxii; Pulv. Rhei, gr. xxvj; Piperis, gr. viij; Croci, gr. iij; Sodae Sulphat. gr. iij. Ft. massa in pil. cxliv divid.

American Surgery Abroad.—The American Medical Monthly welcomes the return of Dr. Sims from Europe.

"He has had," says the Monthly, "an opportunity, and a deserved one, of establishing in the eyes of scientific men in Europe his right to be considered the originator of a mode of operation which, even in the brief space of time since he first promulgated it, has been of immense benefit to suffering humanity, and of which the most persistent and unwarrantable efforts have been made to deprive him. His reception in Paris was most gratifying—not only was he called upon to operate before crowded classes in five of the largest hospitals of that city, but the most eminent surgeons confided their private patients to his professional skill. Fourteen cases, only four of which were not *unusually bad*, and fourteen cures! Such is the brief record of his labors in the Capital of the Medical World. We doubt if a similar score had ever been run up there before. 'I was certainly very lucky,' says the doctor modestly. The one of us who has had the most experience, will probably be best able to estimate the 'luck' at its true value. The *Times*—not the English Blood and Thunder Warsheet, but its more peaceably-inclined namesake on this side the water—recently contained a letter from its special correspondent in Paris, which was almost entirely devoted to the consideration of Dr. Sims' visit and success. He mentions a case which possesses considerable interest in view of the question of the employment of anæsthetics, which has recently been brought so prominently before the profession in this city.

"It was that of a young Countess, whose case had been pronounced hopeless by the leading surgeons, and who was

placed under his care by Nelaton. A feature of the operation was her narrow escape from death by chloroform. The method adopted for the restoration was both novel and rational, and we are told that it is now generally followed in similar cases in that city. It consisted in "throwing the head of the patient down, and the feet in the air at an angle of about forty-five degrees. By this manœuvre, the brain and heart, with an increased quantity, receive an increased amount of stimulus, from the blood, and life is preserved until the volatile poison has spent its force, and is dissipated." The ordinary measures, friction, artificial respiration, and evulsion of the tongue, were also practiced."

Dysentery.—Dr. Aug. Baudon, in the Bulletin General de Therapeutique, chronicles successful treatment of "a dozen very severe cases of dysentery, characterized by tenesmus, prolapsus ani, bloody stools, 20, 30 to 40 a day, and extreme prostration by the exhibition of the solution of perchloride of iron." He employed also two or three warm water enemata daily, containing from 12 to 25 drops of the solution, with the addition of laudanum if pain was excessive. Duration of disease from four to eight days.

Indian Remedy for Small Pox.—Herbert Miles, M. D., a Surgeon in the British army, states that the Indians in Nova Scotia employ with very marked advantage an infusion of *Sarracenia Purpurea* (pitcher plant). The effect of a large wineglassful is to bring out the eruption freely. "After a second and third dose, given at intervals of from four to six hours, the pustules subside, apparently losing their vitality. The patient feels better, at the end of each dose, and in the graphic expression of the *micmac*, knows there is a great change within him at once. In a subject already covered with the eruption of small-pox in the early stage, a dose or two will dissipate the pustules and subdue the febrile symptoms. The urine, from being scanty and high-colored, becomes pale and abundant, whilst from the first dose the feelings of the patient assure him that the medicine is killing the disease."

The constitutional symptoms subside in three or four days, although, as a precautionary measure, patients are kept quiet until the ninth day. It is alleged that no pitting or discoloration follows. The Indians regard it moreover as a preventive and antidote, and drink the weak infusion during the prevalence of the disease.

Irritable Bladder.—An infusion (ounce to pint) of *Triticum Repens* is extolled in irritable conditions of the bladder, whether from inflammation, gonorrhœa, calculus, or obscure diseases. It is asserted to be much preferable to buchu. The plant should be gathered in the Spring, shortly before the leaves appear. Improvement, if produced at all, will be immediate. If none can be observed in four or five days, it is useless to continue the remedy.

Otalgia.—The *Gazette Medicale de Lyon* recommends in severe earache, when other remedies have failed, equal parts of chloroform and laudanum introduced to the meatus on a piece of cotton. "The first effect produced is a sensation of cold, then there is a numbness, followed by scarcely perceptible pain and refreshing sleep." This is not novel, but good.

Researches on the Changes undergone by Cane Sugar in the Intestinal Canal.—Dr. Kœbner has investigated this subject, and the following are his conclusions:—1. Cane sugar undergoes no change when left from two to four days, at 104° Fah., in natural gastric juice obtained from a dog. 2. Neither is cane transformed into grape sugar in the living stomach. 3. Lactic acid may, after a time, be detected in a mixture of cane sugar, by means of bile which has been freed from mucus. 4. In the ileum cane is transformed into fruit sugar, at least the presence of the latter can be detected in the ileum by means of the polarizing apparatus. 5. Sugar is largely absorbed by the stomach, duodenum, and small intestines. 6. Cane sugar is partly transformed in the latter into lactic acid and fruit sugar. 7. In dogs and rabbits cane sugar occasionally passes unchanged from the intestines into the portal blood, and this probably is the reason why dogs fed on sugar excrete a small-

er quantity of urea. 8. Cane sugar, even when eaten in quantity (by dogs), does not reappear in the urine: but after a saccharine diet, the amount of uric acid appears to be increased.—*N. Syd. Soc. Year Book*, 1860.

On the Formation of Sugar and Amyloid Substance in the Animal Economy.—Dr. R. McDonnell puts the question—Is the liver endowed with the power of converting amyloid substance into sugar during life, and health? In order to elucidate this question, he withdrew, by means of a catheter, blood from the right side of the heart in the living animal, and the results were—

1st. In twelve experiments made on dogs, for some weeks before fed exclusively on meat, traces of sugar were found in the blood of five; there was no sugar found in the blood of the remaining seven.

2d. In four rabbits fed on boiled eggs, meat and butter, for some days, no sugar was detected in the blood drawn from the right side of the heart.

3d. In three dogs, fed on mixed diet, and three rabbits, fed on carrots, potatoes, etc., sugar was found in the blood of the right side of the heart, and in equal quantity in blood from the carotid.

4th. In three rabbits, fed on vegetables, sugar was found in the blood withdrawn during life from the right side of the heart; but double, and in one instance more than treble, the amount was in the blood removed from the same locality after the animals were killed.

Hence, says McDonnell, one seems in some degree justified in concluding that in vegetable-eating animals the blood is normally saccharine; but that the liver does not form and pour out into the blood of the hepatic vessels sugar specially derived from the transformation of the amyloid substance.—*Ibid.*, from *Dublin Hosp. Gaz.*, May 15.

Chorea Dependent on Dental Irritation.—Dr. J. J. LEVICK, in *Am. Jour. Med. Sci.*, recalls attention to the frequent dependence of chorea upon the irritation of dentition or of carious teeth. Many cases appearing about the period of second dentition may be relieved by lancing the gums or drawing the first teeth. The same rule holds with reference to carious teeth.

Sulphuret of Lime is recommended by Dr. LAVAN, in *Championner's Journal*, to promote the regeneration of the substance of bone. He was led to its use by observing the enlargement of the joints of the fingers of those who used this agent diluted in olive oil in frictions for scabies. He has for many years prescribed frictions with sulphuret of lime on the heads of ricketty children where the fontanelles were excessively large or remained open abnormally. He deems it similarly efficacious in facilitating reproduction of bone in fractures, exsections, &c. In rickets he found it to act with "surprising rapidity."

Chlorate of Potash again.—Dr. S. H. SMITH, of New York, in the *Am. Med. Times*, believes that the greatest value of the Chlorate of Potash is as a prophylactic. Given with *Quinine and aperients*, he has seen it repeatedly stave off attacks of epidemic fevers. So also it is "a big thing" in that state of constitution favoring boils, felons, whitlows and carbuncles. He, moreover, conceives it to have acted miraculously in certain mental diseases, associated with an unusual lividity and coldness of the lips, extremities, and sometimes tip of the nose, showing an embarrassed capillary circulation, perhaps ascribable to some morbid condition of the circulating fluid itself.

It is evident that Dr. Smith believes that Chlorate of Potash is a power in the medical Israel. He will recover.

POISONING BY IODIDE OF POTASSIUM.—A man, thirty-eight years old, who had been suffering from sciatic rheumatism for one year and a half, but who was in other respects healthy, took from an unprofessional person a mixture consisting of two drachms of iodide of potassium, four ounces of water, and one ounce of syrup, in doses of one tablespoonful every half-hour. In the whole thirty-six grains of the iodide were taken. After the second dose symptoms of poisoning commenced and continued to increase during three hours, when the patient presented the following conditions. His head was hot, his face puffed, his eyes swollen, sunken, and very sensitive to light.

The submaxillary region was swollen, there was great restlessness, singing in the head, sharp pains in the head, and great exudation of mucus and saliva from the mouth; there was no particular smell perceptible from the mouth; the inclination was for sickness, but there was no pain in the lower portion of the body. In the circulatory system there was nothing abnormal. As a drink, starch flour was ordered in water, vomiting was induced by the process of tickling the fauces, leeches were applied to the temples and to the back of the ears, and cold cloths were put to the head. In twelve hours the pains ceased, and in forty-eight hours the flow of saliva, the symptoms of swelling, and the other signs of poisoning had vanished.

Clarus, who narrates this case from the 'Nass. Med. Jahrb.', p. 747, 1861, where it is recorded by Dr. Orth, remarks upon it that it is one of interest, because the symptoms called forth by the iodine were pure, and were not interfered with by the symptoms arising from any other disease; because no general symptom of disease was exhibited except nausea; and lately, because the symptoms induced followed so small a dose as thirty-six grains of the salt, in a strong, young, and not oversensitive man.—*Schmidt's Jahrbucher*, Band, iii., Jahrgang 1861.—*Drug. Circular*.

Quinine and Veratria in Typhoid Fever.—VOGT, on comparison of tabulated cases, prefers veratria to quina in the treatment of typhoid fever. The medical multiplication table was seemingly never more improperly invoked, as the two articles have nothing in common, and are adapted to almost totally different cases. Of three cases of typhoid fever, side by side, one might be benefitted by the veratria, the next by quina, and the third seriously injured by either. Such observations as those of Dr. Vogt's must injure the profession in the view of truly scientific thinkers.

The Letheon Patent.—Dr. W. T. G. Morton having instituted a suit under his patent for the use of Ether as an anæsthetic, against the N. Y. Eye Infirmary, the presiding Judge (Shipman), after hearing considerable testimony, having come to the conclusion that the patent was void, and

moreover the subject matter was not patentable, directed the jury to find a verdict for the defendants.

Where will the indefatigable W. T. G. M. "turn up" next? Nevertheless, in justice to Boston, if not to W. T. G. M., it must be admitted that anæsthesia, as a practical thing, was born in that city—W. T. G. M. being accoucheur in chief, Prof. Jackson counsel (or rather accessory after the fact), and our venerable confrere, the *Bost. Med. Journal*, the first to chronicle the event.

Homœopathy in the Army.—The subjoined terse resolutions were prepared by Dr. Valentine Mott, and at his suggestion adopted by the Academy, although "the Napoleon of American Surgeons" was not himself present, in consequence of an unlucky fracture of a metacarpal bone, which latter we earnestly trust will not permanently interfere with the surgical ambidexterity of the professional veteran.

"Whereas: Petitions have lately been presented to the Senate and House of Representatives of the United States, for the employment of homœopathsists as surgeons in the Army; therefore,

Resolved, That the New York Academy of Medicine deem it their duty in the interest of the Army, respectfully to protest against the employment of such practitioners, for the following reasons:—

"1st. That the practice wherever subjected to accurate observation has failed to establish itself in any hospital.

"2d. That in the countries where it originated and attained its fullest degrees of development, it has not been introduced into the army or navy.

"3d. That it is no more worthy of such introduction than other kindred methods of practice as closely allied to quackery.

"4th. That such appointments would dissatisfy and dishearten the Medical Staff of the Army, who understand the true character of homœopathy, and who have entered the service of their country, with confidence that the government would strive to elevate the standard and promote the efficiency of the Medical Staff—results surely to be defeated by the appointment of homœopathsists.

"*Resolved*, That a copy of the above resolutions be sent to

the Hon. Ira Harris of the U. S. Senate, and the Hon. F. A. Conkling of the House of Representatives, with a request that the resolutions be presented to the two houses of Congress."

The Citro-Ammoniacal Pyro-Phosphate of Iron.—Prof. E. N. Chapman, of Brooklyn, in an elaborate article in the *Bost. Med. Journal* recommends the (briefly) Pyro-Phosphate of Iron as tasteless, elegant in appearance, and unlikely to disagree with the most delicate stomach. In addition to the full powers of the chalybeates, it affords new virtues giving "this special compound advantages possessed by none other in the Materia Medica. This arises from the pyro-phosphoric acid." The large physiological importance of phosphorus as an element especially of the great ganglionic centres; the part it plays in cytogenesis; its general presence in all the solids and fluids of the body; its therapeutic powers as a cerebral stimulant and aphrodisiac—are severally alluded to, and defect in its reception or assimilation considered as morbid.

Prof. Chapman thinks the presence of Phosphoric acid and elemental phosphorus communicates especial value to cod liver oil; that the combination, as in many other cases, gives an article possessed of new and superior powers.

But, he observes, the liberation of phosphorus in the oil by the processes of life will be slight compared with that set free in the blood by pyrophosphate of iron; since the iron is immediately assimilated and appropriated in the processes of nutrition by the red globules of the blood.

"Hence we discover the reason why the oil will augment the deposition of the fat, and, when oxidized, will augment the activity of all the various functions, and why the stimulation from this oil is far less than that from the pyrophosphate of iron. Thus these two medicines afford a means of introducing phosphorus and its acid into the system, a point otherwise difficult to be attained; and secure certain peculiar medicinal results through the nature of their combinations.

Practical, clinical facts, the only reliable foundation for

medical practice, confirm, in my experience, the views thus presented on a therapeutical and physiological basis.

We have employed the citro-ammoniacal pyrophosphate of iron, in certain conditions, with the most marked and gratifying results.

Whenever the blood becomes thin and watery, there are, almost invariably, troublesome attendant symptoms, seriously retarding the restoration of the patient to health. In all, there will be a lack of nerve-power, from the hydræmic state of the circulation. Hence, could we, temporarily, augment the stimulating properties of the blood, whilst we are administering the iron, we should prepare the way and present the conditions required for its assimilation, which otherwise might be impossible. Experience has taught most physicians this practical fact, and the indications have usually been fulfilled by the simultaneous use of wine and iron. We have found the pyrophosphate singularly appropriate under these circumstances, and as superior as a natural excitant must ever be over any substitute we may devise. Persons who have been over-worked by mental application and prostrated by disquietude and care, or persons who have a shattered nerve-power from some constant source of bodily suffering, have a thousand anomalous symptoms dependent on an imperfectly generated and distributed nerve-power—such as wakefulness, trembling spasmodic movements, palpitations, &c. For this class of symptoms, the pyrophosphate of iron often affords relief in two or three days; and thus prepares the way for the ultimate cure that may be expected from the martial salts. Many times, patients have expressed wonder at the calming and tranquillizing effects of the medicine; not only in mere functional aberrations and irregularities, but also in cases where actual disease existed in the nerve-centres. In both instances, the stimulation is immediate and transient, and can be of no avail, except by removing irregular nervous distribution; whilst the iron is appropriated more readily by the organic forces now freed from a great source of disorder.

After detailing several cases illustrative of the therapeutic power of the agent he adds:

“For all the varied and anomalous symptoms of hysterical patients, which are usually some phase of irregular distribution of the nervous influence, the pyro-phosphate acts with singular efficiency; diffusing and equalizing the nerve-power, and thus secondarily restoring a more active capillary circula-

tion and a more healthful play of all the functions. Cases illustrative of this point are unnecessary in the milder forms of nervous disease, since the claims of our remedy are sufficiently vindicated in the severer ones hitherto mentioned.

The pyrophosphate of iron has another property scarcely to be expected, and one we should never discover except by actual observation. All of the common preparations of iron are apt to oppress the stomach, coat the tongue and destroy the appetite, especially when the patient is much debilitated. Many, from a delicate, sensitive organization, cannot, under any circumstances, take iron with profit, it being, in their language, too heating. The pyrophosphate is friendly to the stomach, will never cause any irritation of the gastric surfaces, and, to our knowledge, has never disagreed with any patient, however incompatible the other forms may have been. Besides, it appears to possess a tonic power, and will restore the appetite and digestion after the failure of bitters, quinine, wine, &c., often in extreme cases of anæmia, amenorrhœa and chlorosis, as we have witnessed in many instances in our obstetric clinique. It seemed to afford just the grade of stimulus required by the stomach, and the improvement, thus initiated, continued without interruption, under this single remedy, to the complete cure of the patient. This acceptability, friendliness, corrigent and roborant action of this form of iron on the digestive organs is a valuable peculiarity which renders it, in many states of disease, superior to all others, and perhaps to any drug whatsoever. Besides, its tastelessness, when dissolved in syrup, is a great recommendation in this age of sugar, when patients desire to die *sweetly*, and will not endure anything nauseous or unpleasant, though death be knocking at the door. This we might expect in children who *bring* up their parents to a tolerably high state of discipline, and issue their orders of command from the cabinet councils of the nursery. We, medical men, taking the world as we find it, are obliged to render our doses as palatable as possible for babies, both great and small. This object, without detriment in the choice of our means, is singularly and notably attained by the use of the syrup of the pyrophosphate of iron."

Religious Excitement.—The Irish Lunatic Asylum at Ulster chronicles a large increase of accessions consequent upon two months of general protracted religious excitement. It is assigned as the cause of insanity in 97 males and 86 females.

Prof. Dixi Crosby, of New Hampshire, has been nominated to the highly important office of Railroad Commissioner for that State. This is a compliment of a high order to a most estimable and deserving man, more peculiarly grateful as the nomination was given by political opponents as well as friends, Dr. Crosby not belonging to the dominant party of the State.

Deaths of Distinguished Medical Men.—Thos. Southwood Smith, M. D., died on the 10th December last, at Florence, where he had been recently sojourning for the benefit of his health. The name of Southwood Smith is familiar to the profession and the public largely, from his labors and success in sanitary reforms. He had reached the age of 73.

Sir John Cæsar Hawkins died November 9th, 1861, aged 89.

Dr. Cathcart Lee, of Dublin, December 16th, aged 50.

Administration of Chloroform.—DR. SIMPSON, the introducer of chloroform as an anæsthetic, now recommends that a single layer of handkerchief be laid over the patient's face, and to let the chloroform fall on it drop by drop. It is claimed that there is less danger, a more speedy effect, and that a less quantity is required. Dr. Young stated that he kept a patient narcotized ten hours with two ounces and a-half.

Application of Arsenic to Carious Teeth.—G. W. ELLIS, M. D., in the *Dental Cosmos*, states that arsenic is now the almost universally adopted medium for the destruction of the dental, and, in skilful hands, is thought to be divested of the many dangers which have been attributed to it. It appears that the most usual practice is to rub up the arsenic with kresote and sulph. morphiæ. The value of the addition of morphia is much debated, but the weight of testimony is in its favor. The amount of arsenic employed varies from the twentieth to the fortieth of a grain, and the duration of the application varies from three to forty-eight hours, depending on the susceptibilities and peculiarities of each individual case. Dr.

Harris recommends it to be left in "about seven hours, or two hours after the tooth has completely ceased aching."

If, on the removal of the arsenic, the part be still sensitive, the renewal of the application is the practice mostly advocated.

Local Anæsthesia.—M. FOURNIER addresses the Academy of Sciences (Paris) on "Chloracetization." At the temperature of 63° Fah., he mixes equal parts of pure crystallizable acetic acid and chloroform, and by means of a wide-mouthed (or narrow, as the case requires,) applies it upon the surface where the epidermis is unbroken, and the phial being kept at the temperature of the hand, complete anæsthesia of the part will soon be induced. He suggests modifications of this process in cases where general anæsthesia is deemed inadmissible.

Diagnosis of Parotitis and Phlegmon of the Face.—M. TROUSSEAU recommends a method of distinction suggested by M. Archambault. Causing the patient to open the mouth widely so as to expose the mouth of Steno's duct by pressure of the parotid, a drop of pus can be expressed if the gland is the part affected. The process seems infallible in differential diagnosis.

The Poison of Continued Fever.—In a recent clinical lecture, Dr. Thomas K. Chambers remarked that he is "inclined to think that the usual path by which the poison enters, is the digestive canal. It is mixed with the saliva and carried down to the stomach, where it possibly may accumulate and be multiplied in the gastric mucus. During severe epidemics, it has been observed that those who smoke, that is, stop up their mouths with tobacco, and spit out the saliva instead of swallowing it, are less liable to be attacked. And in an early stage, even after the poison has begun to act upon the system, the fever may be arrested by emptying the stomach. Those who have watched my practice will have seen several instances of the success of this treatment, the fever cut short and conval-

escence entered upon immediately with its painless debility and emaciation gradually passing away."

Dr. Chambers, from careful analysis of urine in patients prior to and subsequent to the administration of an emetic, concludes that this remedial agency is capable of removing an essential part of the disease, even when the pathognomonic group of symptoms is present.

Before the emetic, the urine gave the usual evidences of destructive metamorphosis of tissue; after it the destruction is overcome by renewal. When this occurs so constantly as the result of a single dose, he finds it difficult to avoid the conclusion that it acts by removing from the mucous membrane a poison only partially absorbed and still adherent to it.

The strong resemblance between the incipient phenomena of continued fever, and those attending the ingestion of unwholesome material, is also cited. Again, the spontaneous vomiting, so very generally found in the first stage of the fever, seems to offer a presumption that the organ first impressed by the poison is the first to resent it.

The successful use of emetics which Dr. C. found to tally so exactly with his theory, unfortunately has not been realized by physicians generally, although emetics have long been held useful by them in the outset of continued fevers. We are inclined to the opinion that the effect of the substances given as emetics, has transcended the merely mechanical unloading of the stomach. Their generally relaxing and sedative character and the powerful influence they exert both through the sanguineous and nervous systems better explain to us their frequently efficient service. It seems more than likely that the emetic effect is only accidental and not necessary to the really valuable effect, any more than salivation is necessary to secure the alterant impression of mercury. However, upon this point there may be much said on both sides.

The effect of the poison received within the system is so graphically described, that we will present it.

"When the poison has once gained admission and is diffused

by means of the circulation through the system, its effect is to destroy the vitality of a considerable amount of the organic living matter with which it comes in contact. The destruction is interstitial, not local—I mean, it does not kill absolutely a certain spot which it touches, like sulphuric acid, but it kills only certain constituents of the tissues. The destruction is partial, not entire—the organic matter is not utterly disorganized, but only reduced to a less vital, less organic condition. It may be traced easiest in the alterations found in the medium by which it is diffused. The blood, the common thoroughfare for distribution of good and evil to the tissues, exhibits a serious change. If you examine it under the microscope, you will find that the normally shaped red disks are diminished in numbers as compared with what Pathologists call “melanosed” corpuscles, that is to say, dying or dead disks, shrivelled and small, of a dark color, with black specks in them, and with gimped edges. In bad cases these are unable to range themselves in rolls, as healthy blood does when it coagulates; they seem to have scarce any attraction for one another, and lie in amorphous heaps. They dissolve easily in the serum and form with it a red fluid. You may trace this dissolution in the dusky stain which the blood communicates to the skin in low fever.

“This poisoning goes on very gradually in some cases, and apparently quicker in others. You heard from this boy that he was five weeks ailing before he gave up work. There was an imperfect renewal of the body, evidenced in the languor after exertion and in the loss of appetite or deficient demand for new material by the formative processes. But destructive assimilation is not arrested, there is no stop to the removal of the effete tissues by excretion. I think it is possible that in a great many cases the disease, the partial death, may stop here, the destroyed tissues and their destroyer together be disorganized, be reduced to their elements and pass away. The idea is incapable of proof, but it would account for a vast number of those mysterious languors, unqualified, unnamed, and often unpitied, which distress patients and puzzle Doctors. However, when the poisoning has reached a certain pitch, the nervous system cannot but take notice thereof, and express itself in the most common mode of taking notice of partial death, namely, by a shivering fit. Any severe injury to the body, a stretching of fibrous tissues, an operation, the fear of an operation, the absorption of destructive drugs, such as anti-mony, for example, will cause more or less of a rigor in pro-

portion to the sensitiveness of the individual. And thus also when an interstitial death of some constituents of the body arrives at a certain point, there is a rigor. This rigor recurs from time to time at uncertain intervals, but generally about once a day.

"Then commences another symptom of partial death—pain. This boy described his head, his limbs, and his back as aching all at once. That is to say, wherever there was most tissue with sensitive nerves in it, there was pain, indicating the diseased state of that tissue. Now all this aching is a symptom of the earlier, rather than of the more advanced stages of fever; not because there is latterly less death, but because the nervous system becomes partially dead too, and does not feel so acutely.

"Observe that this patient tells us of nausea and loss of appetite, which diminished the food eaten—of vomiting, which rejected the greater part of that diminished food—and of diarrhoea, which carried off the remainder scarce digested at all. Yet in spite of this, the amount of solid matter passed from the kidneys is considerable; the specific gravity of the fifteen ounces of urine passed in the twenty-four hours is 1020. The metamorphosis, therefore, of the dead effete tissues into urea and salts is quite as active as in health. There is a continuous destruction of them in spite of the defective supply. This goes on as long as the fever poison lasts in the body, but when it is got rid of, the destruction ceases, no more is metamorphosed than is required to make room for new material, and the specific gravity of the urine falls during convalescence. This may take place very suddenly, as in the instance I gave you of a fever cut short by an emetic; but in general the alteration is more gradual.

"I have mentioned the large amount of urea in proportion to the nutrition in the urine of continued fever, which is rendered evident by its high specific gravity. There is also an increase very evident to the naked eye in another constituent of some importance, the colored organic material, which gives the secretion its ordinary hue. You saw how dark this boy's water was, and how deeply it stained the vessel from which I poured it on a piece of linen. There is great reason to suppose there is a close alliance between this substance and whatever gives the red tint to the blood-disks, and that its excess depends on excessive destruction of those important little living particles."

He observes that the sulphates and phosphates as also the chlorides of the urine are diminished.

The diarrhœa and exuded sanguineous serum drying upon the brown or livid tongue are further evidences of the interstitial decay and death. So also is the increased heat—the natural result of the chemical changes incident to the heightened rapidity of tissue metamorphosis.

The *materies morbi* is not the disease any more than the bullet which passes through the soldier's chest, or is extracted by the surgeon, is the disease which ensues. It is the partial death which has resulted which is the object of treatment. The physician is to enquire "What vitality is wanting, and where? What material is wanting, and where? And, How can I easiest supply them?"

The methods are obvious. First, remove the *materies morbi* so far as it may be reached. Second, supply moisture to the dry and heated surface. Third, supply nitrogenous food. Fourth, turn attention to the *materia medica*—and here, from theoretical considerations, but more especially as confirmed in value by practical experience, Dr. Chambers relies mainly upon free exhibition of dilute hydrochloric acid. He does not rank alcohol as part of the systematic *methodus medendi* of continued fever, but only as an adjuvant to the restorative treatment he advocates. "If there is very complete prostration, delirium of a low muttering character, it is required. A tremulous state of the muscles, marked especially by a quivering of the hands and figures, is a good test for the necessity of it; and so is a sharp, weak, unequal beat of the heart." Under these indications, the positive anæsthetic power of large doses of alcohol may be demanded.

Strangely enough, Dr. C. still adheres to the opinion that local bloodletting is advisable in the so called complications of typhoid.

The concluding words of this valuable lecture correspond so exactly with opinions we have long been in the habit of in-

culcating to students, that we quote them with unmixed pleasure :

"The moral of these cases is, do all you can to increase the appetite. Judge of the value of this drug and that drug, this tonic and that tonic, solely by the effect it has on the desire for food. If any remedy lessen this, insist upon leaving it off, whatever authorities may have recommended it; and form your judgment, not from tradition or prescription, but from its action in the individual case before you."

Pertussis.—Nitric acid is being revived as a remedy for whooping cough. Dr. H. Holmes, M. D. in a paper read before the Middlesex (Mass.) Med. Society (Bost. Med. Jour.) recommends the following: \mathcal{R} Tr. Cardamomi Comp. \mathfrak{z} ss; Syrup. Simpl., \mathfrak{z} iiiss., Acid. Nitrici, gtt. xxxij. M.; S. From five drops to one teaspoonful to be given frequently, according to the age of the patient, and the severity and frequency of the paroxysms.

Evils of bad Drainage.—It appears, from the investigations which have been made, that the cause of the lamented death of Prince Albert is traceable to the imperfect drainage and defective sanitary arrangements *in the neighborhood*, although not directly upon the site of the royal residence. Typhoid diseases are eminently the creatures of bad air, and in preventing this whatever precautions are taken must be not merely local but general and pervading. Not dependent on private caprice but public law.

Commentaries on the Surgery of the War in Portugal, Spain, France, and the Netherlands. From the battle of Rolicca in 1808 to that of Waterloo in 1815; with additions relating to those in the Crimea in 1854 and 1855. Showing the improvements made during and since that period in the great art and science of surgery on all the subjects to which they relate. Revised to October 1855. By G. J. GUTHRIE, F. R. S. Sixth Edition. Philadelphia: J. B. Lippincott &

Co. 1862. Pp. 614 small octavo. For sale by S. C. Griggs & Co., Lake-st., Chicago.

It is safe to say that no other living man has had so wide a range of experience in military surgery as the author of this work. There is scarcely another living name so familiar to the ears of surgeons as his.

With the exception of Baron Larrey, there is perhaps no other name so intimately associated with military surgery as a speciality. And yet Surgeon Guthrie distinctly denies that "Surgery admits of any such distinctions." It is remarkable that Dr. Guthrie's second and extended course of lectures, on which the treatise before us is based, was distinctly recognized by the council of the Royal College of Surgeons as a course on General Surgery, and thus this book is particularly valuable as it contributes to general surgery the information derived by scientific observation of that particular class of casualties to which soldiers are exposed. He who is competent to be a civil surgeon is competent to be a military surgeon, and *vice versa*. The disciplined and scientific accountant can keep the books of a retail dry goods store or those of a government bureau, with equal facility after a few hours inspection. The same remark might be made with regard to diseases; the physician who is thoroughly competent to treat the diseases of one section, can full as easily treat those of another section; those of the camp as well as those of civil life.

We do not set out to praise or compliment this volume of Mr. Guthrie's, for we deem it unnecessary to "carry coals to Newcastle." We would only suggest that it is a book equally as valuable to the surgeon in civil life as to the military surgeon, and we know of no other surgical work which, in as limited space, conveys so vast an amount of inestimable information. It is not a catch-penny thrown upon the war market, but one which will be ranked with the text books and classics of professional literature.

Excessive Lochial Discharge.—"Well, then, you have a feeble, anæmic patient, and the lochial discharge continues profuse and of bright color, six or eight days after labor. You find the uterus remaining above the pubes, nearly as large as a child's head. You give her ergot, as I before described, and, in addition, you make a prescription something like the following: *R*, Quiniæ Sulph. 3j; Ferri Sulph. gr. xij; Ext. Nucis Vomic., Pulv. Capsici aa gr. vj. *M*. Ft. pil (argent) No. 12. *S*. One three times a day, directly after eating. Now ask yourselves what is the object of the quinine, the iron, the nux vomica, the capsicum? I have seen, quite frequently, this condition associated with a very profuse lactation, which is an additional drain upon the system, and the patient is nervous, irritable, and suffers from headache and insomnia. Now, what advantage will you obtain by adding to the above formula four grains of opium?"

Thus says Prof. B. Fordyce Barker, in a recent clinical lecture; and beyond the useful prescription contained, the paragraph suggests an idea worthy of assimilation. Medicinal formulas are very convenient for routine practitioners, but their use endangers the overlooking of the peculiar points of individual cases.

Unfortunately, notwithstanding the deserved ridicule which has been thrown upon excessively complex medical combinations, examination of any apothecary's book will show that polypharmacy is still a prevailing vice. Some of it springs from imitation of English apothecary practice, where the practitioner, not having a legal claim for his advice, finds it necessary to secure his honorarium through a diversity of prescriptions.

Some of it finds its origin in a weak affectation of wisdom, which is supposed to be at its culminating point in a recipe, multitudinous in composition, and appropriately contracted in professional Latin. We have known many such heterogenous conglomerations, pointed out by the admiring patrons of an aspiring physician, as the most thoroughly incontrovertible

evidence of his exceeding wisdom. Some of it has descended from the fathers, and we hesitate to banish it, as we hesitate to burn the worthless heirlooms which fill our old garrets.

Some of it arises from the uncertainty existing in the practitioner's own mind about what is best to do, and he means *to hit somewhere*.

Some of it finds birth in consultations—the creature of compromise. Who has not seen it?

Some of it comes from—but we forbear as the subject grows upon us. Meanwhile we commend Prof. Barker's hint to general consideration.

A Medico-Legal Point.—Prof. Alonzo Clark, commenting on a recent case of suspected homicide, states that it is “safe to infer that neither blood nor bloody effusion in the pleuritic cavities is ever the direct result of suspended respiration, no matter how produced; that when such effusion is found, except when attended by laceration of the lung through violence, it is always either a pathological condition and attended by particular symptoms during life, or a post mortem result that may be considered in the light of a drainage. Even in drowned persons, in whom it is most frequently met with, there is no evidence that it is ever observed till after days, and many times weeks, have elapsed.”

This is a point of considerable importance, and may be considered as thoroughly settled. Nevertheless, we have known several cases in which this bloody effusion in the pleural cavity was thought conclusive evidence of infanticide. The person may have been murdered, but this circumstance is evidence only of ante-mortem disease or post-mortem decomposition.